Textile Industries

Formerly "COTTON"

A W. R. C. Smith Publication

SEPTEMBER, 1953

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If you're planning mill expansion

It's wise to look ahead if you're planning any type of expansion program.

Well-planned, long-range expansion programs, prepared and executed by Robert and Company, have enabled scores of textile companies to expand their production without slow-downs or interruption of output.

For one such client, eight major projects have been put into operation since 1936 without the loss of one day's production.

An engineering survey of your existing operation and future production requirements should help you to properly formulate your expansion program.

ROBERT AND COMPANY ASSOCIATES
Textile Engineering Division
ATLANTA

Serving the Great Names in Textiles for Over 38 Years

Cabin Crafts, Inc.
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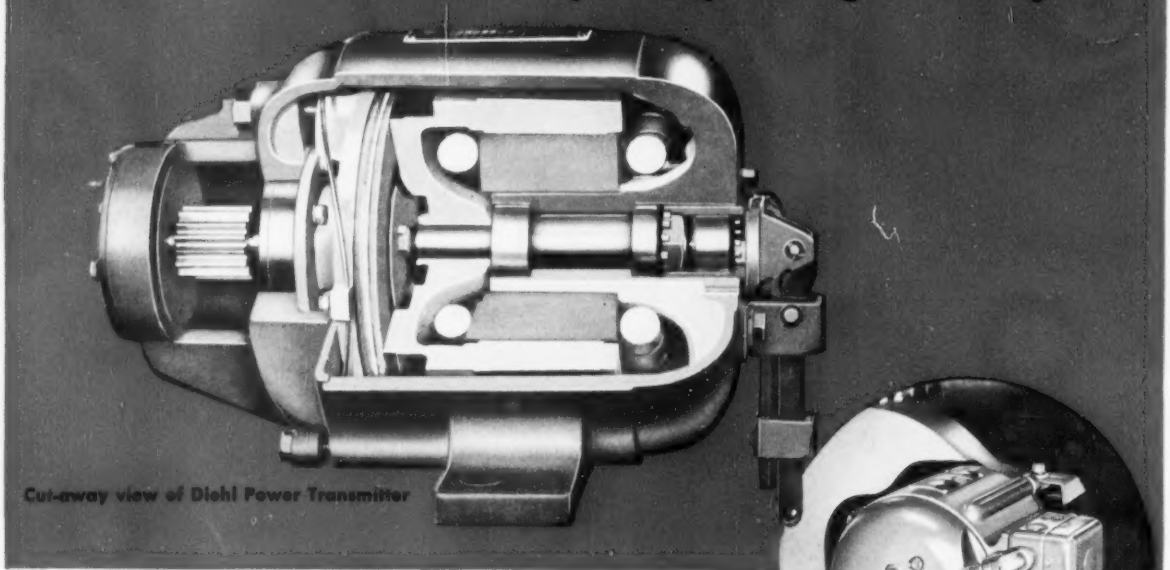
Swift Manufacturing Co.
Swift Spinning Mills
The Springs Cotton Mills
Thomaston Mills
United Merchants & Manufacturers Co., Inc.
West Point Manufacturing Company

Diehl POWER TRANSMITTER FOR YOUR LOOMS

... assures maximum weaving speeds with peak operating efficiency!



Cut-away view of Diehl Power Transmitter

Note the *inverted rotor*, which revolves around the outside of the stator on a hollow shaft. Provides the essential high inertia without the mechanical disadvantages of a separate fly wheel.

Pinion driving shaft, to which clutch plate is fastened, passes through hollow rotor shaft and is shifted axially by simple lever at front end of motor, thus controlling clutch engagement pressure and eliminates thrust bearing on the loom.

Cork friction rings are mounted on both sides of clutch plate, which may be shifted by shipper handle linkage to contact either the rotor or cast iron brake shoe, thus starting or stopping the loom.

The Diehl Power Transmitter is a unit comprised of an inverted high inertia motor, a clutch and a brake – integrated to provide a compact "power package" that meets the industry's need for ample, consistent power with instantaneous precise operating control.

Leading textile mills are using thousands of Diehl Power Transmitters on looms made by the DRAPER CORPORATION of Hopedale, Mass. – many of which have been in continuous use for as much as five years!

Mill men are enthusiastic about the advantages derived from the use of the Diehl Power Transmitter, including . . .

- "Stored power" for smooth, rapid starts and positive picking.
- Precision Braking.
- Minimum fluctuations of speed and motor current.
- Lower power consumption.
- Lower motor heat losses.
- Lack of current regeneration.
- Simplicity and ease of maintenance which has resulted in increased work loads for fixers and weavers at many mills.

. . . all of which adds up to increased *mill production, improved quality of cloth, lowered operating costs and long, trouble-free service.*

We will welcome an opportunity to tell you – without obligation – how the Diehl Power Transmitter can bring these benefits to you.

2148

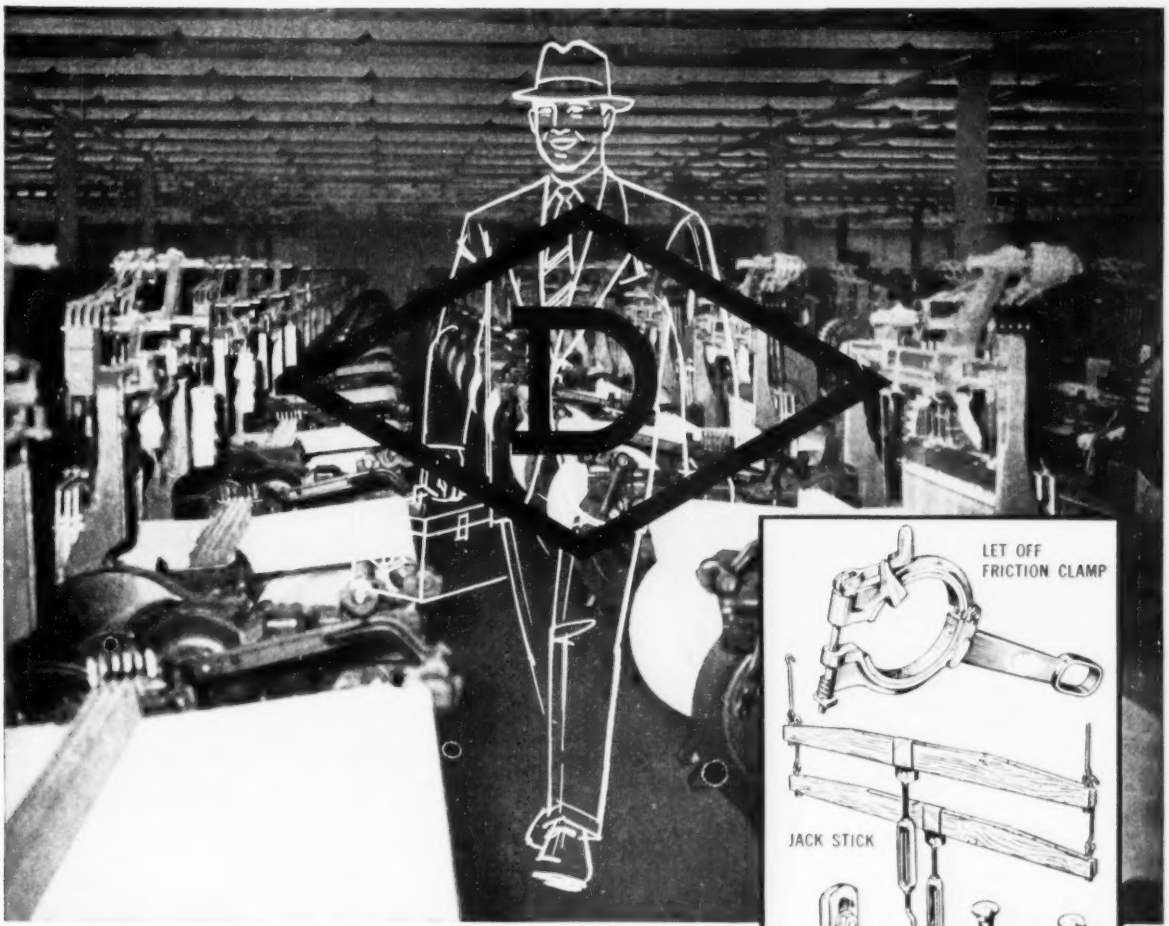
DIEHL MANUFACTURING COMPANY

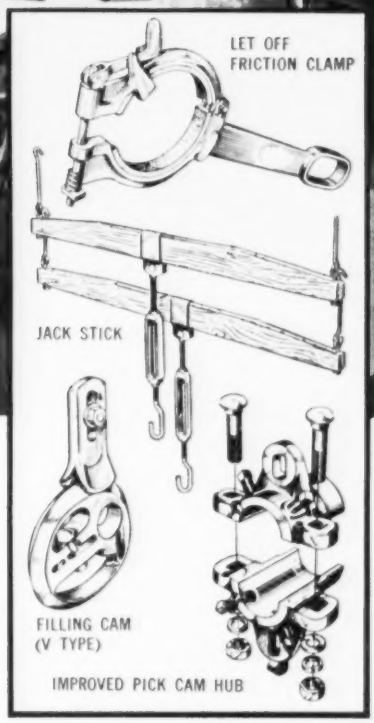
Electrical Division of THE SINGER MANUFACTURING COMPANY

FINDERNE PLANT, SOMERVILLE, NEW JERSEY

ATLANTA • BALTIMORE • BOSTON • CHICAGO • DETROIT • NEW YORK • PHILADELPHIA • WORCESTER

DRAPER REPAIR PARTS- SERVICE A PLUS FACTOR





Behind the "Diamond D" on your castings stands the Draper Serviceman — a plus factor when you buy Draper repair parts. Be sure you are getting the best. Be sure you are getting the latest. Rely on your serviceman to see that you are getting the most from your parts. His services are yours for the asking.

"Retaining Leadership through Research"

DRAPER CORPORATION

ATLANTA, GA. HOPEDALE, MASS. SPARTANBURG, S.C.

THE WORLD'S LARGEST MANUFACTURER OF AUTOMATIC LOOMS

for better carding

specify

CARD CLOTHING

Good yarns largely depend on the quality of the stock to be carded. Good carding depends on quality Card Clothing.

Eighty-seven years ago soft iron wire and leather foundation were the two basic items used in Card Clothing manufacture. Today specialized hardened and tempered steel wire set with our Tufferizing Process in specially prepared foundations gives you the widest choice and unparalleled quality.

Yes, today Tuffer Card Clothing gives you that *better carding* you have a right to expect.

TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

HOWARD BROS.

A-3

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.
Branch: Philadelphia, Pa. *Direct Representation in Canada*

NBP ABC CCA

Textile Industries

Vol. 117, No. 9
September, 1953

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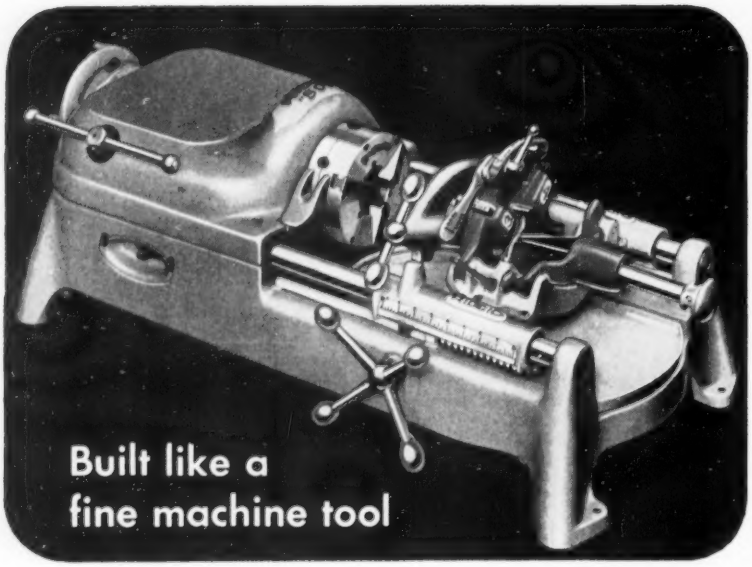
The pipe and bolt threading machine that gives you

Top Performance

RIDGID "500"



...with exclusive new quick-opening Quadritype Die Head

RIDGID engineering does it again! New "500" threads, cuts and reams with the efficiency and speed you've long wanted. Ready for work on any size pipe, ⅛" to 2", in seconds! Independent operation of tools, more than ample power, concealed oil system—a score of other great new features. No wonder its popularity has been immediate and wide-spread. See it, try it at your Supply House—buy the more-for-your-money RIDGID "500"!

New Quadritype die head adjusts instantly 1" to 2" regardless of position of lever, without removing dies or head from machine. Same work-saver feature in Dualtype die heads—¼" and ⅜", ½" and ¾". Monotype also available, ⅛" to 2"—also bolt die heads, ¼" to 2".

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID
Work-Saver Pipe Tools

Shorts and Remnants

► September is here and theoretically we've all had our vacations, and theoretically we're supposed to be up and at 'em, whether it be selling it or making it. Theoretically most conventions are over, but if you miss the boss dyer, finisher, or superintendent in a wet processing plant, theoretically he's gone to Chicago for the AATCC convention. If the big boss is a Yankee and he disappears during the fourth week this month, you'll probably locate him at Portsmouth where theoretically he's solving the affairs of state.

► Theoretically TI is a practical manufacturing and management journal, and practically no material theoretically inclined that isn't proved practical is included. Though we kid ourselves and others often, the dope on practical air cleaning in this issue is both theoretical and practical, as so many theoretical ideas on paper are until proved practical (see News Brief page 107 and item on page 153).

► Old S & R got all bogged down in Theory and Practice and got to thinking about the AATCC and that national convention in Chicago—beautiful Chicago on Lake Michigan with the world's largest hotel, the biggest stock yards, the longest shore line, the most beautiful parks—the biggest and best so they say there, in almost any category. If the White Sox beat out the Yankees for the American League pennant, they will take over baseball, too. They almost out brag the Texans. Reminds us of the story of the Texan visitor in Chicago who was being shown the sights and who topped every sight and building with something bigger and better back home. Came nightfall and his hosts slipped a live lobster in his bed as he was retiring. The Texan jumped three feet in the air and yelled "What's that?" "Oh, that's just a Chicago bedbug," replied his hosts. "Yeah, I see now. Young'un, ain't it?," came back the Texan.

► Speaking of textile chemicals, you may have noted that Arkansas Co. is celebrating it's 50th anniversary

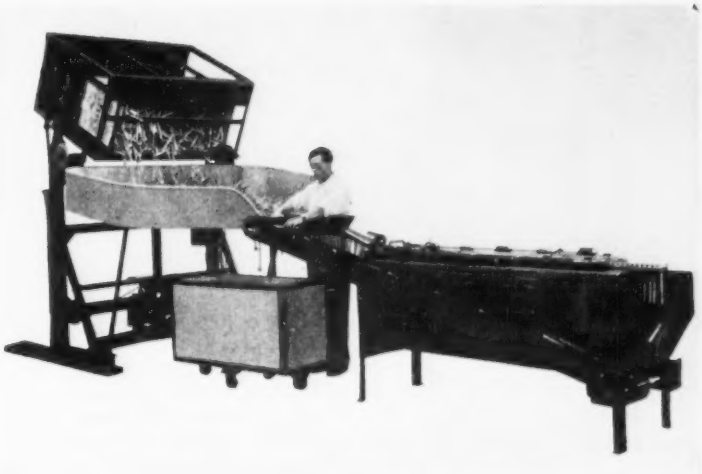
There's

NEW ECONOMY

for cotton mills in

THE NEW TYPE L

Bobbin Cleaning Machine



The modern Type L, originally designed for synthetic and silk fibers, has surpassed all expectations for cleaning cotton yarns. Cotton mills using the new Type L report equal or better production from this machine than any other quill cleaning equipment previously used.

Simplified design reduces down time and maintenance costs.

No bobbin damage at the cleaning operation results in lower bobbin replacement and better weaving. Seconds are reduced because bobbin damage caused by other cleaning machines or methods is eliminated.

Terrell engineers have been solving bobbin cleaning and handling problems for many years. Let us show you how the above savings can be effected.

THE TERRELL MACHINE COMPANY, Inc.

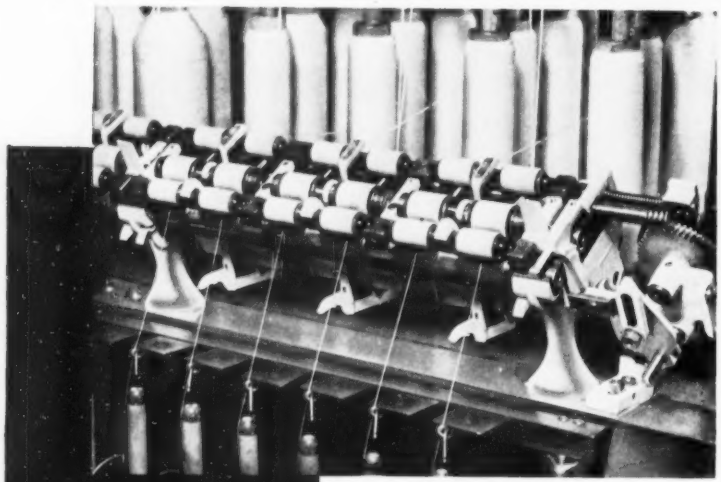
CHARLOTTE, NORTH CAROLINA

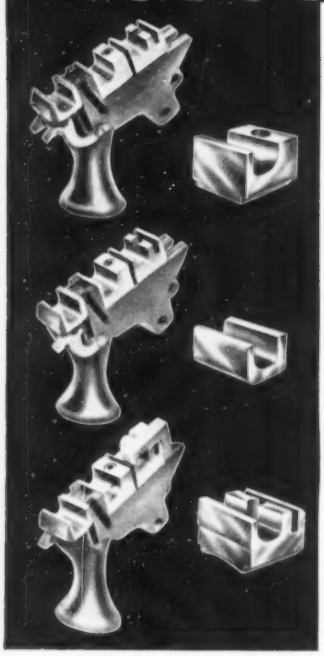
Proof of **WAKEFIELD** *Performance*

NO. 1 OF A SERIES

BECAUSE THEY WITHSTAND HEAVY TOP ROLL PRESSURE

SACO-LOWELL SHOPS USE *WAKEFIELD* ROLL STAND BEARINGS





Shaw Spinning, is one of the most effective long draft spinning assemblies in the world for cotton and short synthetics. After 10 years of experimentation, Saco-Lowell has found that fibre control required for long draft necessitated heavy roll pressure. This heavy pressure required a better, stronger, more rugged bearing. Saco-Lowell found that Wakefield bearings met and exceeded all their requirements.

For years, the Wakefield Bearing Corporation has produced all types of oilless and self lubricating bearings, bushings and machine parts. In addition, Wakefield holds an enviable reputation for quality and reliability in the production of all types of Special Textile Bearings and Parts including wood bearings, white wood turnings, swifts and swift parts and textile loom sheaves.

If you have a special problem our experienced research, development and engineering staffs are available for consultation without obligation. Our diversified and lengthy experience in the field makes Wakefield a name on which you can rely with utmost confidence to fill your requirements. Complete catalog information will be sent on request.

WAKEFIELD

BEARING CORP.

29-99 FOUNDRY STREET

WAKEFIELD, MASS.

In Canada: WAKEFIELD BEARINGS OF CANADA, Limited, 55 St. James St., West, Montreal, Can.

Shorts and Remnants

this year. Congratulations and best wishes for another 50. (They have been good advertisers in TI for some 25 years or so.)

► Another good textile chemical concern breaks out in "Good Housekeeping" this month on Norane (Warwick Chemical Div. Sun Oil Co.). While we do not make any money on Good Housekeeping advertising, we are reminded of a plan we dreamed up for a TI "Seal of Approval." The idea was that a three-page advertiser got a certain size seal to use in his advertisement, a six-page advertiser a little larger one, a real decent seal for 12 pages in the year, and for 24 pages and over a "whopper." Only trouble is these big seals would cover up the page and not leave room for advertising.

► By the way, anyone wanting to buy any benzyltrimethyl-ammonium chloride can get it from Commercial Solvents, according to a news release. Have you got a longer name than this?

► That Atlantic City Show scheduled for next April is theoretically sound and

was proved in a practical manner at the last one. You'll not want to miss it, so put your plans on paper now. Plan to go and send Joe. And who is "Joe"? He's your key man who ought to be on hand to discuss with you the equipment and supplies you'll see.

► Speaking of plans, our good friend in the red clay hills of Alabama points out that on a cold day when someone makes us mad, we usually plan to count to ten before answering; he suggests counting to a hundred during hot weather.

► From one of our labor union publications we pick up the statement that "the right to be obnoxious, misguided and un-American is America's most precious asset." It's a good quote, and the members of that paper's union are doing a good job exercising the right.

► The mills also exercised their right to get proffered reprints of our July story on "The Blessings of Unionism?" in quantities of from several to 1200. Still a few "bless-

. . . . THE MILL CALLED FOR:

Good spinning qualities in dyed orlon tops

The dyehouse delivered a perfect job thanks to Sandoz' Technical Service

• They needed a satisfactory lubricant to counteract the static electricity produced by orlon fibers, which prevented proper spinning of blends containing over 50% orlon. Shade, strength, light and crock fastness of dyed orlon, which are reduced by many lubricants, must be unaffected.

SUGGESTED BY SANDOZ:

Sandoz technicians suggested that Ceranine HC, a cationic product, be used. The tops were treated in a bath containing 1% acetic acid to take care of the alkalinity, and 1% Ceranine HC Conc. The goods were rinsed in this bath after dyeing for 10-15 minutes at 100° F.

Thorough tests showed a marked lubricating effect on the fiber, counteracting the static electricity that caused much trouble in spinning. Also Ceranine HC preserved the shade, light fastness, and crock fastness of the dyed orlon. The finish produced with Ceranine can be favorably compared with cashmere.

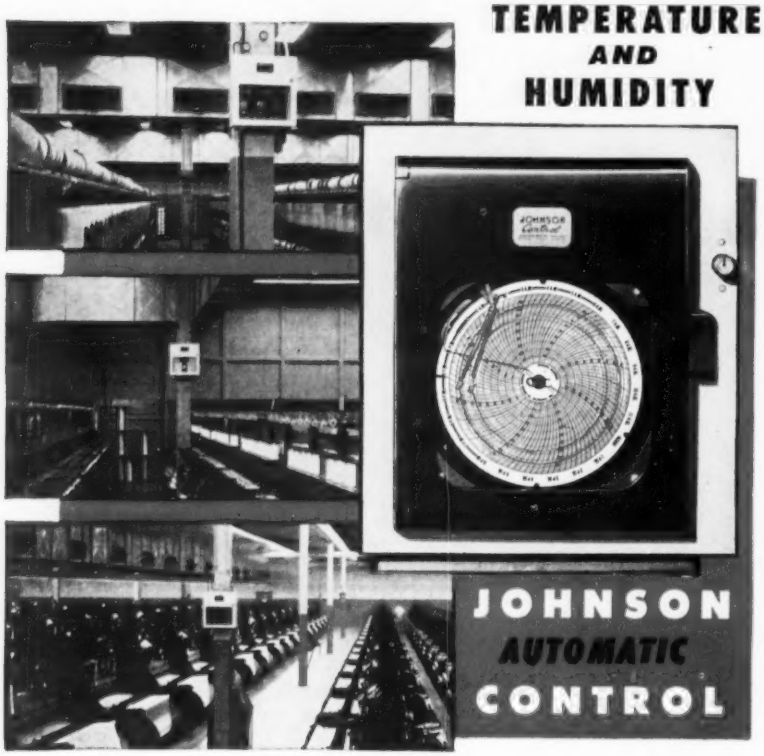
If you have a dyeing or finishing problem or would like details on Ceranine HC, call your nearest Sandoz office in Hudson, Mass.; Providence; Fairlawn, N. J.; Philadelphia; Charlotte; Cincinnati; Los Angeles; Montreal; Toronto. Sandoz Chemical Works, Inc., 61 Van Dam Street, New York 13, N. Y.

SANDOZ

SANDOZ

THINKS AHEAD WITH TEXTILES

for *EXACT* regulation of TEMPERATURE AND HUMIDITY



in ASPIRATING CABINETS

High speed machinery, new materials and modern processing methods demand the most exacting control of temperature and humidity in production areas. To meet these rigid requirements, Johnson Automatic Temperature and Humidity Control apparatus is mounted in specially designed Johnson Aspirating Cabinets. These cabinets insure positive circulation of sampled air over the controllers while protecting the measuring and operating mechanisms from dust, lint and tampering.

Any desired combination of these features may be included in Johnson Aspirating Cabinets:

THERMOSTAT (Proportional Action) to operate Johnson Valves on heat sources with modulating action.

HUMIDOSTAT (Proportional Action) to control Johnson Valves on humidifying apparatus.

DOUBLE INLET BLOWER to insure accurate measurement of temperature and humidity in the treated area.

ELECTRIC SWITCH ASSEMBLY to provide a convenient connection for the blower motor.

TIMING PULSATOR to establish "off periods" during which the Humidostat cannot operate . . . prevents over humidification.

ADJUSTABLE CUMULATOR to permit re-adjustment of the action of the Humidostat.

AIR FILTER to remove particles from the air.

OTHER ACCESSORIES AVAILABLE: Weekend Control Selection, Recorder Stations, Recorder-Controllers, Humidifiers (Evaporating Pans, Spray Systems, Atomizing Systems, Perforated Pipes), Bull's Eye Indicators, Humidity Alarms, Switch-over Stations.

Whether your problem involves a new or existing mill, a single small area or complete plant coverage, an experienced engineer from a nearby Johnson branch office will gladly explain the advantages of Johnson Automatic Temperature and Humidity Control. There is no obligation. For more complete details about Johnson Aspirating Cabinets, write for Bulletin H-400. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

JOHNSON *Automatic Temperature and Air Conditioning* **CONTROL**

MANUFACTURE • APPLICATION • INSTALLATION • SINCE 1885

Shorts and Remnants

ings" around for the asking.

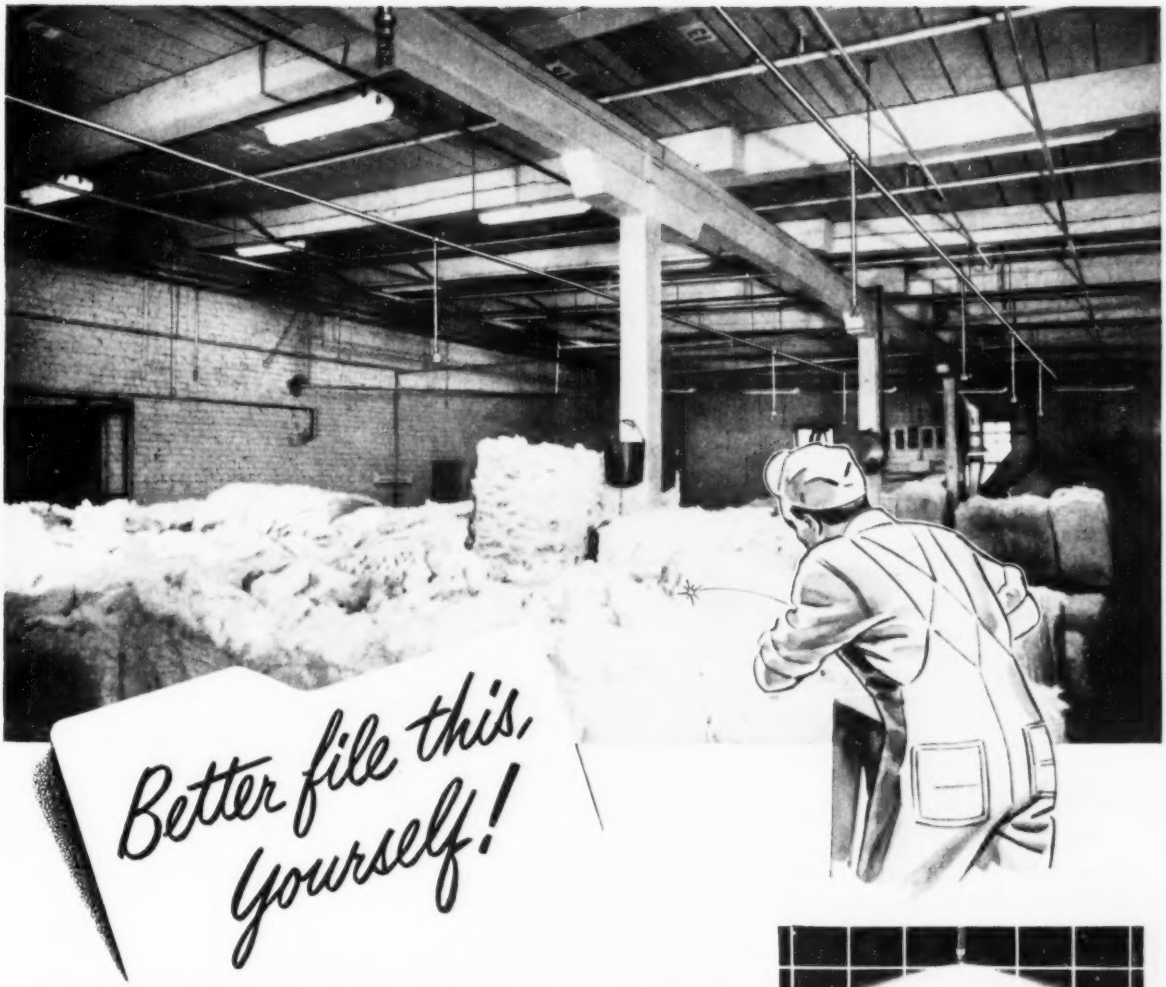
► From up in Maine comes the request for six articles from TI on quality control and reducing yarn defects, and for subscription rates. There's a prospective subscriber for us to work on—and just when we thought we had 'em all sold.

► Taking a cue from TI's May issue, the Japanese advise that they also are interested in measuring scroop and want to buy scroop measuring equipment. Sorry, but all the scroop measurers were designed and built in the author's laboratories; he may be able to supply specifications on request. There just aren't any commercial scroop measurers.

► Tremendous interest was also shown by textile executives in a short review we published on "Pay Contracts with Key Men." Contains some good data and plans. But future authors to the textile field might remember that the word "contract" is taboo because it brings back memories of Operation Dixie. However, the book is a success and Operation wasn't.

► The postal cards traveled from the West Coast to all six Smith Publishing editors: "Manner of living and methods of doing things is more likely to be the real reasons for discrimination rather than differences of religious beliefs or racial lines." That, the signature, and nothing more. Not even a request for a reprint, and there was still room at the bottom. Fine way to make a living.

►This'nd That: Legislative approval has been granted San Quentin to start a cotton textile plant. The first odor theory was developed in 47 B. C. by Titus Lucretius Carus; since that time 25 other theories have been put forth. The decimal point (.) was instituted by Christopher Clavius in 1593. Men are chosen for executive positions because choosing them is expedient, because they are available, or because they are pleasant fellows. Tests have proved the feasibility of conveyor belt human transit systems, dreamed of for years. If you haven't seen Elliott Springs' dining car menu for the L&C Railroad, you're short a laugh. No simpler means for processing organic wastes can be found than



Better file this, Yourself!

Clear proof that GRINNELL OPENER ROOM SYSTEMS give maximum flash fire protection using minimum water

While filing a bearing in a room with more than 60 open cotton bales, a workman caused a spark to fall into one of the bales, igniting it. Another workman moved over to the nearest control station, pressed the valve lever of the Grinnell Opener Room System for a few seconds, and put the fire out.

Water damage slight . . .

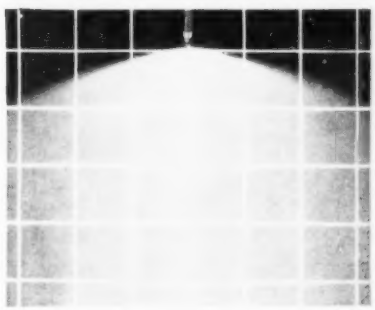
Only 3 of the bales were damaged by the fire — a $300 to $400 loss. Wetting of the remaining bales was so slight that the cotton was ready for the opener machines next morning. Plant operation was uninterrupted.

Safeguards a wide area . . .

Why not satisfy yourself about the many features Grinnell Opener Room Systems provide? Learn how surface fibres *within a wide area* are dampened by a misty spray, preventing the spread of fire. Discover how the self-closing valve prevents excessive water damage by shutting off the water flow. Where time does not permit normal evaporation, no more than a thin top layer of cotton ever need be stripped off the bales for drying.

Special and supplementary protection . . .

A Grinnell Opener Room Fire Protection system is not intended to take the place of regular Grinnell Automatic Sprinkler Protection, but is supplementary to it. The former takes care of "flash" fires; the latter, of deep seated fires far enough advanced to operate a sprinkler system.



Spray from a Grinnell ProtectoSpray nozzle used in Opener Room Systems.

Call for the facts . . .

Before fire strikes your opener room, call your nearby Grinnell Fire Protection Office for complete facts. Grinnell Company, Inc., Providence, R. I. Branches in principal cities.

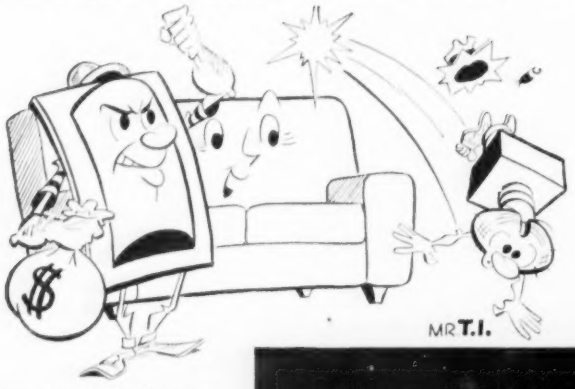
GRINNELL

FIRE PROTECTION SYSTEMS

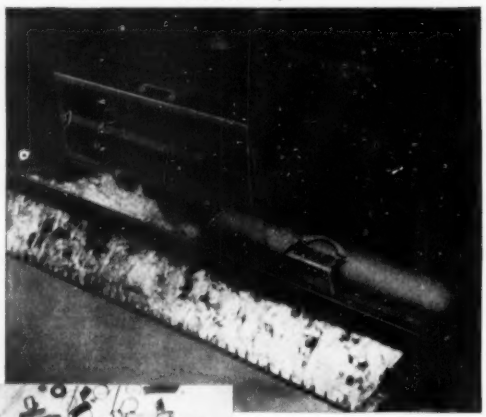
Manufacturing, Engineering and Installation of Automatic Sprinklers Since 1878

FURNITURE MANUFACTURER Reports:

ERIEZ SPIKED APRON MAGNETS INCREASE GARNETT CLOTHING LIFE 300%



Preventing $5400 damage to garnetts in 3 years' time . . . increasing the life of garnett clothing three times . . . precluding fires in process lines . . . eliminating costly downtime — that's the fine record of three 58" Eriez Spiked Apron Magnets at the Chicago plant of a leading furniture manufacturer. Installed on feeders ahead of the garnetts, the magnets pull several pounds of tacks, staples and other tramp iron each day from waste cotton used to make batting for the company's cushions and other fine upholstered furniture. "The Eriez Spiked Apron Magnets are doing such a fine job of eliminating tramp iron from our lines, that operation without them would now be unthinkable!"



Eriez Spiked Apron Magnet was the first permanent magnet specifically designed for textile applications. Brackets, hinges, textile lift handles . . . everything necessary to mount and put into operation are included in the package. With Eriez Spiked Apron Magnets on your feeders, no tramp iron can ever get through to chew up cards, garnetts, etc., or to start fires!

Here are 5 features exclusive with Eriez magnetic separators:

1. Riveted construction adds rigidity . . . increases structural strength.
2. Cover adds to longitudinal stiffness . . . prevents tampering and accumulation of iron on backs of castings with consequent shorting of magnetic circuit.
3. Two-section magnet . . . makes cleaning quick, simple, easy.
4. Insulation confines magnetic strength to working surface . . . no bleeding to surrounding areas.
5. Flush air gap prevents gathering of fine iron which can short out magnetic field.

Write today for FREE 6-page Bulletin 563 which describes all Eriez magnetic separator installations for the textile industry.

ERIEZ MANUFACTURING COMPANY

12 Magnet Drive • Erie, Pennsylvania

Nine Out of Ten Textile Mills Specify ERIEZ

Shorts and Remnants

by use of properly designed lagoons. Last year the South was the second largest turkey producing area in the U. S.

► With reference to S&R being moved from the sepia section to page 4, said a TI staff member's wife: "I liked it better on a single page by itself." But you now get more than a page of S&R up front, the staff member defended. Reply: "I know. That's what I don't like about it!" Selah.

► But we hope the rest of you will Keep Your Eye on TI.

Shoe Cloth

" . . . kindly send us about six copies of the reprint from the June 1953 issue . . . referring to the Liberty Fabrics of New York warp knit nylon shoe cloth. . . "

ROBERT F. RIEHL
Vice-President
Knitcraft, Inc.
West New York, N. J.

Who is "Contributor No."?

" . . . please tell us the address of 'Contributor No.....' whose letter is published on page.....; also . . . we want to get in touch with the author. . . "

FOREIGN

► Except in rare instances, the items and letters appearing in our technical discussion department are identified only by number. Correspondence to the authors will be forwarded by the editors.

TI's DBF Manual

" . . . your 'Dyeing, Bleaching and Finishing Manual' . . . is very attractive booklet and should be of much value to anyone interested in the subject. It is no wonder that TEXTILE INDUSTRIES is so popular and is a magazine which I see at so many mills on my travels. . . "

ARTHUR E. HIRST
Standard Chemical Products, Inc.
Pawtucket, R. I.

► The "Dyeing, Bleaching and Finishing Manual" is the newest addition to TI's list of technical books, available as circulation premiums.

Designing Your Own

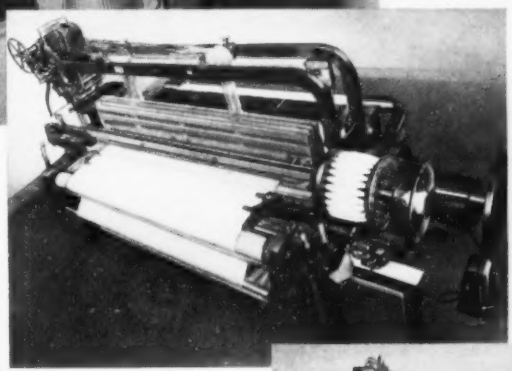
" . . . to obtain three copies of article . . . 'How to Design Your Own Plaiter' . . . found extremely interesting and it has filled the long

Are you Dressing him or her ... or Both?

For colorful, comfortable cottons that customers really "cotton to" ... C&K's convertible C Looms.

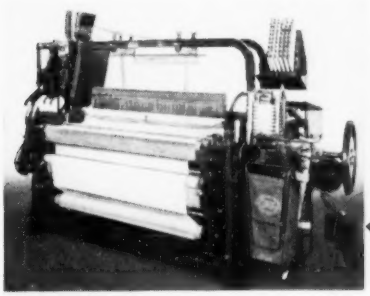
Cottons or crepes . . . woolens or worsteds . . . synthetics or blends. Single-color or multi-color filling mixing fabrics. Men's wear or women's wear . . . upholstery fabrics or carpeting. Whatever you have in mind, C&K has the loom to weave it . . . *and to give you the greatest amount of salable cloth at lowest cost-per-yard.* See C&K today.

For today's high-fashion favorite ... the new crepe ... C&K's S-6 is the *only* loom that can weave this fabric.

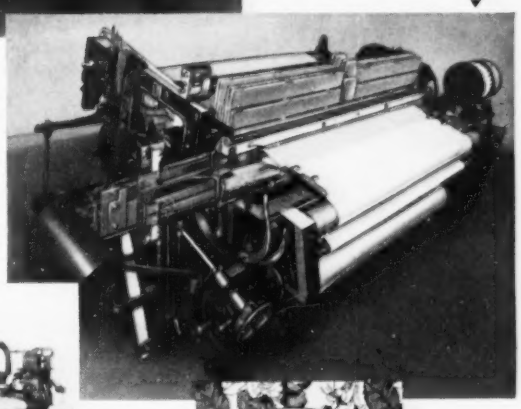


NEW SINGLE-PURPOSE C&K 2 x 1 BOX FILLING MIXING LOOM equipped with Rotary Magazine and Head Motion . . . one of the newest additions to C&K's *complete line* of performance-proved FM looms.

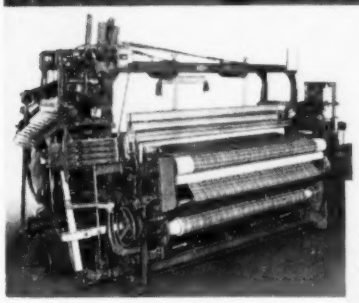
NEW SINGLE-PURPOSE C&K 2 x 1 BOX FILLING MIXING LOOM equipped with Rotary Magazine and End Cam. C&K also builds multi-purpose FM Looms with Call Box Feature (see W, C and S Looms below).



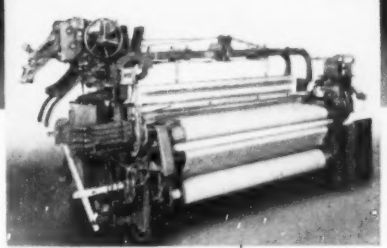
S LOOMS are the most modern machines for weaving nylons, rayons, acetates, combinations and pure silks. Built in all widths . . . call box . . . *filling mixing* . . . bobbin-changing . . . shuttle changing . . . many shuttle sizes . . . pick and pick . . . Jacquard . . . and what other features do you want?



W LOOMS for unmatched versatility in weaving woolens, worsteds, upholstery and blended fabrics. Made in all widths . . . bobbin-changing . . . *filling mixing* . . . tri-color . . . convertible . . . pick and pick . . . and many other features.



C LOOMS for widest flexibility in weaving cottons, spun rayons and blends for towels, blankets, decorative fabrics, bedspreads, handkerchiefs, shirtings, suitings, dress goods. Built in all widths . . . bobbin-changing . . . shuttle changing . . . convertible . . . tri-color . . . pick and pick . . . leno motions . . . all-purpose take-up . . . 30" beams . . . and many more C&K-engineered advantages.



This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are **WOVEN** Fabrics.

Mark this Date Now . . . April 26-30, 1954
AMERICAN TEXTILE MACHINERY EXHIBITION, ATLANTIC CITY

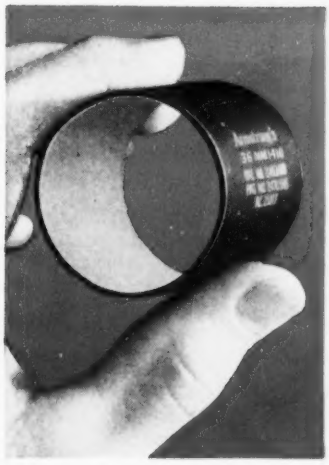
Crompton & Knowles LOOM WORKS
WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

This NO-7075 apron

NO SLIPPAGE HERE
Black outer face has the right friction to keep the top apron moving smoothly. This prevents yarn irregularities which occur when aprons slip at points of contact.
RUNS CLEANER HERE
White inner face won't attract loose fibers, doesn't tend to build up excessive waste inside the apron.
RUNS SMOOTHER HERE
Carefully regulated surface friction of inner face allows smooth, sure transfer of power from driving roll to apron, yet prevents jamming or buckling at nose bar.
ARMSTRONG'S ACCOTEX

runs cleaner and smoother, eliminates top apron slippage



Armstrong's newest Accotex® Apron has inner and outer surface engineered for top performance on new long-draft frames

This black and white Armstrong apron is designed to help you get the most out of the new long-draft equipment with close-pin cradles. The NO-7075 Accotex Apron combines cleaner, smoother inside operation with enough surface friction to eliminate top apron slippage and assure you of clean, uniform yarn.

Each of the two synthetic rubber compounds used to make this seamless apron is engineered specifically for the job it does. The black outer layer has excellent tear and abrasion resistance plus the high-friction surface needed to drive the top apron efficiently and without slippage.

The white inner layer has a much lower coefficient of friction. It permits the bottom roll to drive the apron firmly and smoothly and, at the same time, lets the apron slide easily over the nose bar without jamming or buckling. In addition, this white inside layer runs exceptionally clean. You'll find that it doesn't tend to collect loose fibers or to produce objectionable black deposits inside the apron.

Vulcanized between the two layers of rubber is a core of strong cotton cords which prevent stretching or curled edges.

A test in your mill will show you conclusively how well this new NO-7075 apron—engineered for the job it does—works with the newest types of long-draft frames. Call your Armstrong man today or write to Armstrong Cork Company, Textile Products Department, 6409 Ivy Street, Lancaster, Penna. All Accotex Aprons are available for export.

APRONS

A complete line of top-quality aprons

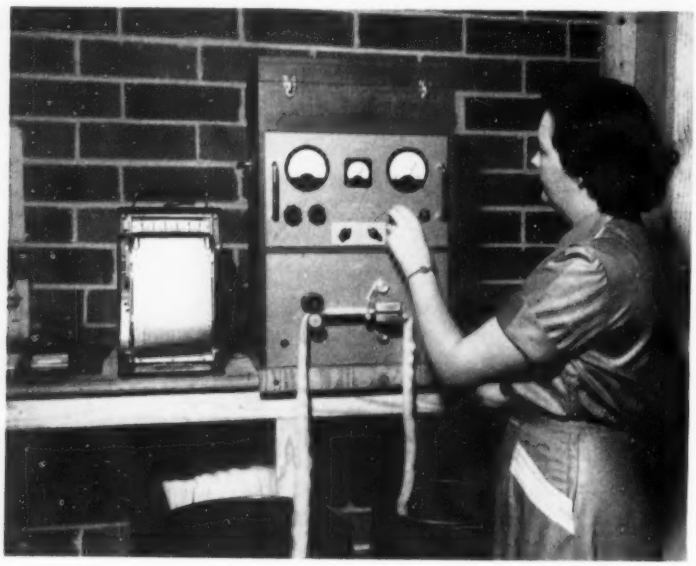
FOR CLOSE-PIN CRADLES. The NO-7075 apron gives you smooth, clean operation on the latest type equipment.

FOR SINGLE-APRON SPINNING. The super-flexible NO-750 insures smooth slip-roll action needed for uniform yarn.

FOR DOUBLE-APRON SPINNING. The NO-700 Accotex is smooth and long wearing, first choice in hundreds of mills.

How Farnell Mills Division, Woonsocket Worsted Co., Uses

FIELDEN YARN EVENNESS RECORDER and INTEGRATOR



At the Farnell Mills Division, Laurens, S. C., one woman, using a Fielden Yarn Evenness Recorder and Integrator gives complete quality control of the yarns produced by this mill, and two neighboring mills.

To quote Edwin A. Farnell, Jr., President of Woonsocket Worsted Company,

"It has proved to be invaluable in our operation.

"After starting to use it, a repetitive fault was discovered in an operation not apparent to visual examination—and was corrected promptly. Now, production of each operation is checked on a regular daily or weekly schedule.

"It has a minimum of adjustments and computation and interpretation of results are not difficult for the average employee.

"It has the added advantage of being less costly than other testers.

"All the control work for three mills is accomplished on a systematical basis, in one laboratory, the heart of which is the Fielden Yarn Evenness Recorder and Integrator."

Write for full description as applied to your requirements.

Fielden INSTRUMENT DIVISION

ROBERTSHAW-FULTON CONTROLS CO.
2920 North 4th Street • Philadelphia, Pa

Shorts and Remnants

felt want as we have never come across anything of this type in any of the current literature. . . "

H. M. PONTEFRACT
Hockmeyer Bros. Inc.
Lowell, Mass.

Evenness Testing

" . . . wish to compliment you on the very fine article in the July issue on 'The Current Story on Evenness Testing' by Paul W. Mullen."

MACK D. HEATON
Superintendent
Eastman (Ga.) Cotton Mills

" . . . congratulate you on 'Evenness Testing.' Apparently you were not aware that there is a Pacific Integrator that goes with the Pacific Evenness Tester . . . there is an integrator for the determination of standard deviation and coefficient of variation and which also gives the true average thickness of the sample tested. . . "

HAROLD W. LEITCH
General Superintendent
in Charge of Research
Pacific Mills
Lawrence (Mass.) Division

" . . . article interesting and informative . . . one small typographical error . . . states that Uniformity Analyzer costs about $2200 . . . this should read $3280 . . . "

D. M. GASKILL
Textile Section
Brush Electronics Co.
Cleveland, Ohio

" . . . take exceptions to the title of the very interesting article 'The Current Story on Evenness Testing' . . . think the article can hardly be called 'current' when it omits any mention of the Fielden evenness tester. . . "

S. M. FERRER
744 Broad St.
Newark, N. J.

► We are happy to include the above information to round out our story on evenness testing, and we have requested the author to give us a follow-up discussion in the near future on the Fielden instrument. No omission was intended.

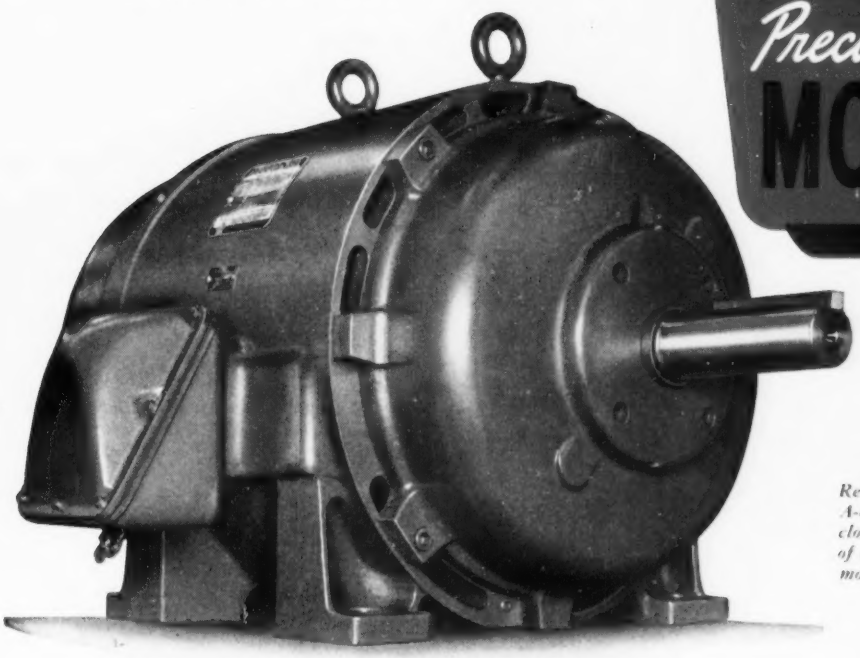
Cavitomic Cotton in Texas?

" . . . just finished reading TI's article in July concerning Cavitomic Cotton . . . this company has investigated the possibilities of similar

FOR RUGGED SERVICE...

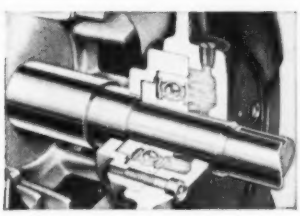
"All motors are NOT alike!"

RELIANCE *Precision-Built* **MOTORS**



Reliance Totally-enclosed Fan-cooled A-c. Motor. All other standard enclosures available, with wide choice of mechanical designs and special mountings. Ratings from 3/4 to 300 hp.

- ☆ Heavy shafts, bearing to bearing
- ☆ Indestructible pressure-cast rotors
- ☆ Shock-resistant frame and bearing-bracket construction



. . . AND THE BEST PRE-LUBRICATED BEARING DESIGN

The Reliance pre-lubricated bearing provides *four times more operating hours without re-lubrication* than any other bearing used in motors today. And—whatever your lubrication schedule—*you just can't grease 'em wrong!* To get the complete "inside story" on motor bearings, write today for Bulletin B-2201. It contains hard facts on the advantages of the Reliance pre-lubricated bearing design, with cutaway view, cross-section diagram, comparison chart, and statements by bearing manufacturers. B-1458-J

RELIANCE ELECTRIC AND ENGINEERING CO.

1085 Ivanhoe Road, Cleveland 10, Ohio • ***Sales Representatives in Principal Cities***

For further information use Handy Return Card, Page 212

Stehedco
and
Southern

WORLD FAMOUS TRADE NAMES OF THE
STEEL HEDDLE MFG. CO.
and SOUTHERN SHUTTLES DIVISION

2100 W. Allegheny Ave. • Philadelphia 32, Pa.

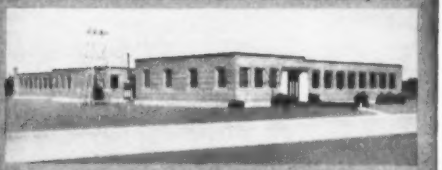
Paris, Greenville, S. C.

Manufacturers of

Flat Steel Heddles • Loom Harness Frames • Loom Reeds (Pitch Band and All Metal, Regular and Stainless Steel Wire) • Loom Harness Accessories • Automatic and Hand Threaded Southern Shuttles (Tempered Dogwood, Persimmon, and Fibre Covered) • Warp Preparation Equipment • Electrode Rods (Fibre and Plastic Insulation) • Drop Wires • Creel Stop Motions • Pigtail Thread Guides • Tension Washers • Light Metal Stampings • Hard Chrome Plating • Hard Chrome Plated Parts • Rayon Cake Holder

268 McDonough Blvd. • Atlanta 1, Ga.

STEEL HEDDLE COMPANY OF CANADA, Ltd.



310 St. Hubert Street • Granby, Quebec, Canada

STEHEDCO and SOUTHERN Products
"Weave the World's Needs"

1-O-1X

Shorts and Remnants

troubles in Texas . . . would appreciate your sending us the copies of the four references shown in this article . . . speak frankly in saying that your magazine is read with utmost interest every month. . . "

BRYAN C. MILLER, JR.
Manager
Texas Textile Mills
Gonzales, Texas

► If Cavitoma is in Texas, we'll wager it's the biggest and best Cavitoma of all.

Training of Interest

"Do you still have available a reprint of your March 1952 article on 'Textile Training'? If so, we would appreciate having a copy."

R. M. BRADLEY
Hyde-Rakestraw Co.
Philadelphia, Pa.

"Request one reprint of 'Textile Training,' which appeared in March, 1952, issue of TEXTILE INDUSTRIES."

ADMINISTRATIVE ASSISTANT
The Calico Mills
Ahmedabad, India

► A large over-run was made. Reprints available.

Old Timer

"Please send articles . . . 'Imagination' mentioned by OLD-TIMER in recent column."

J. C. GODFREY
Vice-Pres. & Supt.
Calhoun Mills
Calhoun Falls, S. C.

► Series ran from August to December 1939. Reprints not available. Suggest Bibliofilm Service, U. S. Dept. of Agriculture.

Canadians Gracious Hosts

" . . . Canadian authorities . . . gracious hosts to foreign business men . . . charters buses to enable foreign exhibitors [at Toronto Fair] to spend a pleasant Sunday beside Niagara Falls . . . were 1474 exhibitors of 27 different nations . . . Canadian textile industry is progressive. . . "

VICTOR SAXL
Vice-President
Stellite American Corp.
New York, N. Y.

Expert at 25

" . . . a young man 25 years old desires to come to America . . . says he is an 'expert in textiles' . . . cannot understand English now . . . any chance for him after he learns some English. . . ?"

NAME WITHHELD

► Mill men interested in bringing this young textile expert to America will be given address to contact direct.

"He's the new inspector you hired."

We Go To Jail

" . . . very much interested in receiving descriptive literature on the MAK spinning machines, as offered on page 200 of TI for June 1953 . . . recently received legislative approval for the construction of a cotton textile plant here. . . "

H. O. TEETS
Warden
California State Prison
San Quentin, Calif.

" . . . send more information on shrinking machine for prison plant. . "

H. EARL GREY
Gen. Sup.
Eastern State Penitentiary
Philadelphia, Pa.

Or To War

" . . . my mill almost have destroyed by the War, so that I have to reconstruction it. Introduce me to machinery makers. . . "

WOO JI HYOUNG
Hanyoung Spinning Co.
Seoul, Korea

► That last is an example of optimism, but may be a forerunner of peaceful days. We sincerely hope that his optimism is borne out and that he may be spinning yarns again shortly.

San Quentin or Korea, Prison or War Zone, North, South, East or West, from the Rock-ribbed Coast of Maine to the Sunny Shores of California—from the Halls of Montezuma to the Shores of Tripoli—wherever textile mills are being built and run, you will find TI on the job and being looked to for machinery and supplies.

Comparisons

MADE THEM WORLD FAMOUS!

PIN DOWN THESE SOUTHERN PIONEERING ACHIEVEMENTS AND COMPARE THEIR ADVANTAGES.

1. The revolutionary Magnum Tip design gives "the Southern tip a permanent grip".

2. Multiple laminated washers under the tip insures perfect blending of steel tip to shuttle body which is so essential in shuttles for synthetic weaving.

3. Exclusive Tempered Dogwood guarantees maximum shuttle life.

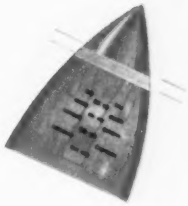
4. The two bolt grip construction that provides absolute vertical and horizontal stability.

5. The Permaligne hardened steel grip strap for strength and permanency of spring setting maintains a positive control of bobbin alignment.

6. The patented one piece scroll eye (108 series) is the fastest automatic threader and assures complete shedding of every filling loop around eye.

7. The application of patented lock nuts in shuttle construction and design.

8. The originators of Stehide the bonding material of Phenolic impregnated cloth laminate that gives longer shuttle life, greater and smoother wear, resistance to splitting, and minimizes wood defects.



THE LARGEST AND FINEST SINGLE UNIT SHUTTLE PLANT IN THE WORLD - - -

invites all Textile Mills to consider and compare these Southern advantages with others when ordering your shuttle requirements.

Choice of the best in raw materials.

Each step is quality controlled.

The finest in engineering and research facilities.

A plant capacity equal to any demands.

Consult your nearest Southern Shuttle Field Engineer for the information you require on all types of Southern Shuttles.

It's Southern for quality, service and delivery.

0-4

SOUTHERN SHUTTLES

A DIVISION OF **STEEL HEDDLE MFG. CO.**

PARIS, GREENVILLE, S. C.

TEMPERED
TRADE MARK REG.

there's a NEW MOON rising in the great textile belt of America!

our SOUTHWESTERN DIVISION has just been opened in DALLAS

. . . and HFL IMPROVED LOOM PARTS

are now obtainable with even greater speed than heretofore by those important mills, in the growing South, that can be served from this strategic point!

the DALLAS WAREHOUSE saves days of waiting for loom parts that so often are urgently needed.

the DALLAS WAREHOUSE is the latest step we have taken to render the utmost in service and cooperation to all textile mills.

the DALLAS WAREHOUSE is an economic necessity — especially in these times of increasing competitive conditions among the mills.

We invite all mills west of the Mississippi to send their orders and inquiries direct to our Manager, **Morris Q. Dorsett, 1839 Levee St., Dallas, Texas** (Telephone Randolph 3041).

If you are already our customer you know this is true: **HFL IMPROVED LOOM PARTS** insure minimum cost per yard of production.

HFL
IMPROVED LOOM PARTS

H. F. LIVERMORE CORPORATION

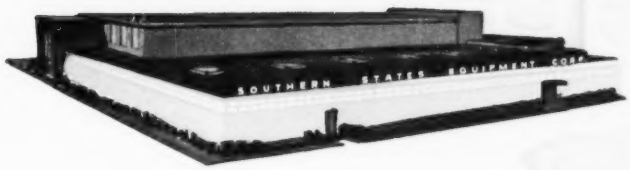
ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT
BOSTON 34, MASS.

SOUTHERN DIVISION
GREENVILLE, S. C.

SOUTHWESTERN DIVISION
DALLAS, TEXAS

in the HEART



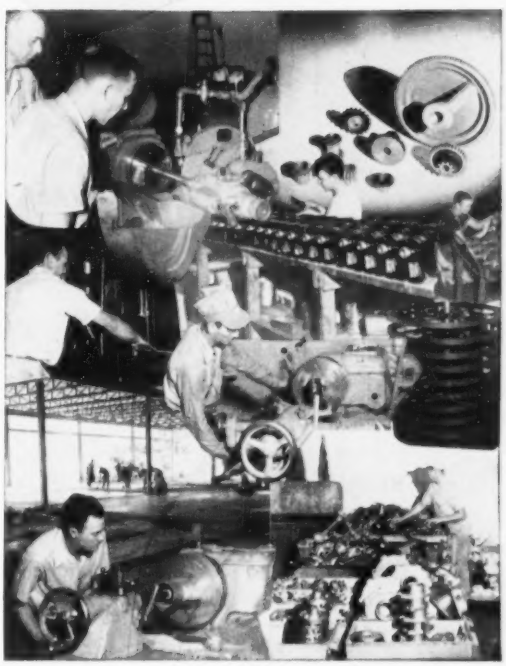
★ Hampton

of the TEXTILE INDUSTRY

To meet the ever increasing demands for Southern States replacement parts and textile specialties, a substantial expansion of manufacturing facilities has been completed. Located in the heart of the rapidly expanding textile industry, Southern States offers complete engineering and fabrication service on replacement parts. These new facilities make it possible for a large number of the more rapidly wearing parts for preparatory equipment to be shipped from stock.

Working closely with textile manufacturers, Southern States engineers have developed such money saving devices as the Type C-1 Ball Bearing Comb Box, Off End Stand, the new SS Individual Card Drive and Coiler Conversion Units for cards and drawing frames.

An integral part of the textile industry for more than 40 years, Southern States is now equipped to serve you better than ever.



Southern States Equipment Corp.

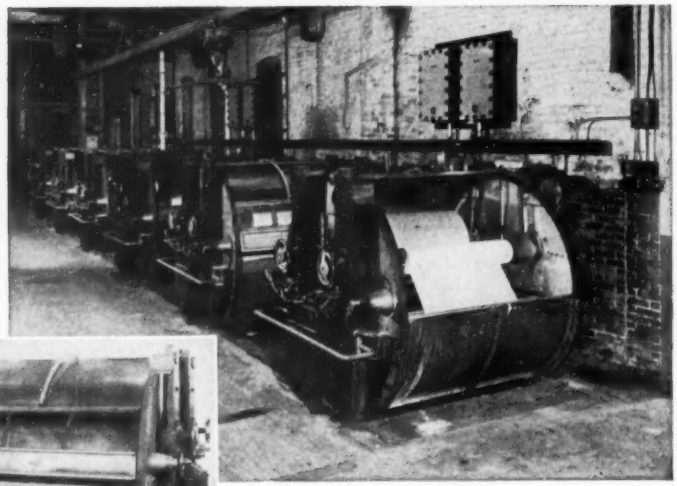
HAMPTON GEORGIA

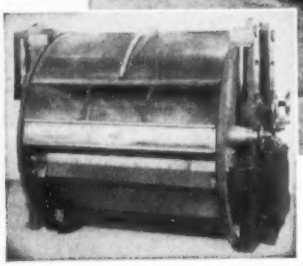
Representatives - Mechanical Division

William A. Knapp, Atlanta, Georgia
Matthews Equipment Co., Providence, R. I.
John C. Walters, Hampton, Georgia
C. H. Kennington, Charlotte, N. C.
Frank Birchfield, Alex. City, Ala.
Textile Parts & Machine Co., Gastonia, N. C.
F. C. Todd, Inc., Gastonia, N. C.

Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

NOW – for Better, Faster Dyeing of Synthetics with GLASCO DYE JIG ENCLOSURE





Enclosure in closed position

This enclosure now makes it possible to maintain controlled mean temperature throughout dyeing time of nylons, acetate and other synthetics.

As a consequence, dyeing time is shortened. Uniform stripping is assured in redyeing or changing the color of a fabric. Chrome blues and other difficult colors can be jig-dyed. Colors are well dispersed, and level dyeing without shifting is possible. In soaping, temperature is prevented from rising too high and so causing a dull finish. Steam and water are saved.

Other advantages:

New design of hood saves space—no overhead obstructions, roller doors on bearings swing down and under jig when open — minimizes dripping — prevents steam blast toward operator when hood is opened — no cables, chains, counterweight posts to obstruct. Jig enclosure can be fitted to any jig — note big windows for easy observation of interior when jig is closed.

Manufacturers of modern, custom built metal equipment for wet processing uses, including Dye Jig Enclosures, Dye Tubs and Becks, Wash Tubs, etc. of stainless steel and other metals that resist corrosion under most alkali and acid conditions.

GLASCO EQUIPMENT CORP.

Pioneer Fabricators of Stainless Steel Equipment

10 WAIT STREET GLASCO PRODUCTS **PATERSON 4, N. J.**

Phila. Area: Marpie Organization, 1200 Commercial Trust Bldg., Philadelphia 2, Pa.

New York State: Sanders Industrial Equip. Co., 1351 Broadway, Albany 4, N. Y.

South: Henry H. Hersey Co., 44 Norwood Place, Greenville, So. Car.

New England: Harris & Underhill, 446 Statler Bldg., Boston, Mass.

Personal NOTES

ABOUT MEN YOU KNOW

W. B. Perrin, formerly general manager, has been named vice-president of Abney Mills. **J. I. Loftis** was advanced to general manager of the Brandon, Brandon Dryer Felt, and Brandon Filament Rayon plants of Greenville, and the Brandon plant of Woodruff. **Carp W. Seigler** will assist Mr. Loftis. **Calvin W. McCombs** was made assistant general manager of the Belton, Anderson, and Courtenay plants; and **K. D. Crosby** was made superintendent of Belton Mills.

Professor Charles A. Jones has retired from the A. French Textile School of the Georgia Institute of Technology after forty-seven years of

Prof. Jones

service. Being graduated from this same school in 1904, he returned in 1906 as instructor in the textile chemistry and dyeing department and served as school director from 1930 to 1945.

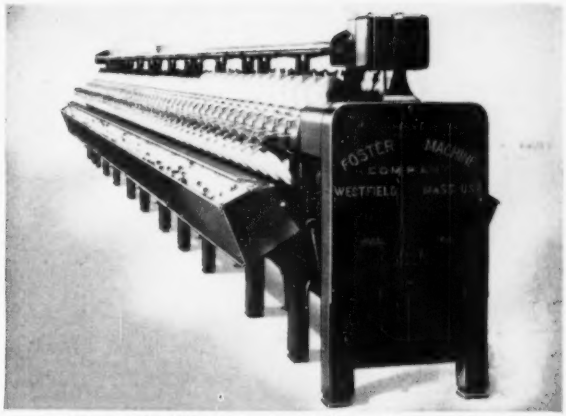
Ben Haverck, formerly overseer of carding at the Mij Mills, has joined Allenton (R. I.) Woolen Mills in a similar capacity.

Newest member of the cost department of Avondale Mills is **Albert L. Johnson,** who was previously employed by the Eagle and Phenix Mills in Columbus, Ga.

Jules Wareck, Irving B. Cohen, and **Theodore I. Feiner** were recently made merchandising vice-presidents of Burlington Mills Corp.

John H. Dulin has succeeded M. W. Nixon, resigned, as head of the dyeing department at Carol-May Finishing Co., Concord, N. C. He was previously with the Allied Chemical & Dye Corp. and with Lakewood Hosiery Mills, Inc.

W. O. Reed, formerly with Peck



Foster Model 102 Winder for winding cotton, mercerized woolen, worsted, merino, spun silk and spun rayon yarns

PARTNERS in PROGRESS

The high-speed, versatile, Foster Model 102 Winder outproduces older models by two to three times and at a third less labor per pound of yarn. Its increased capacity and efficiency are results of several ingenious refinements plus the liberal use of Fafnir Ball Bearings... another example of design progress in textile machines.

Rollshafts, camshafts, and the head end of the Foster 102 Winder are equipped with Fafnir Sealed and Shielded Ball Bearings resulting in quick start-up and smoother, more uniform, more dependable operation... with substantial reduction in maintenance. The rollshaft and camshaft installations required a new method of fastening the bearings to the shafts and a simple quick method of relubrication... developed jointly by Foster and Fafnir engineers.

For over 25 years, Fafnir has been a Foster supplier... providing ball bearings for original equipment and replacement. This long association is a result of more than just good bearings. Of equal importance is the Fafnir "attitude and aptitude"... a way of looking at bearing problems from the designer's viewpoint and an ability to supply the precise bearings to fit the need. Maybe this combination can help you. The Fafnir Bearing Company, New Britain, Conn.

Fafnir Ball Bearing "Economy" Packages

Sealed & Shielded Radial Type Bearings

. . . with various arrangements of seals and shields.

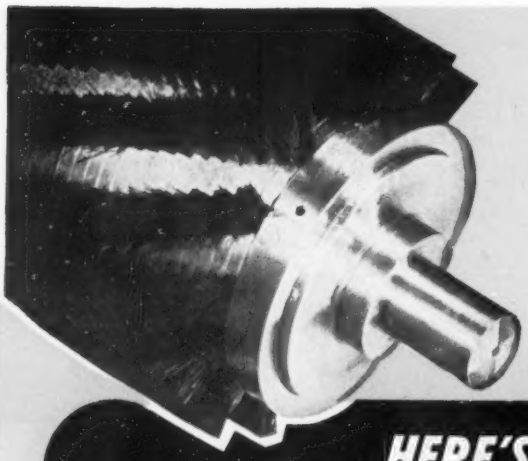
Power Transmission Units

. . . featuring the Fafnir Wide Inner Ring Bearing with Self-Locking Collar

Special Textile Units

for practically every textile machinery application.

FAFNIR
BALL BEARINGS
MOST COMPLETE LINE IN AMERICA



HERE'S WHY

JENKINS' METLKOR® BRUSHES

are on

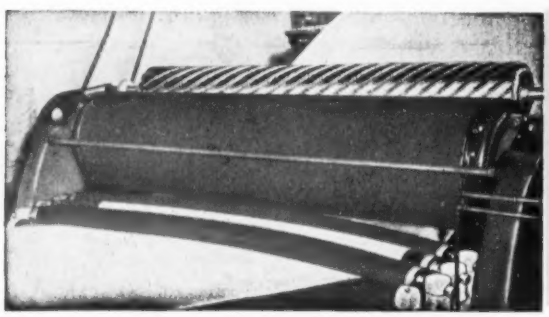
JAMES HUNTER SQUEEZE ROLLS

James Hunter Machine Co., North Adams, Mass., wanted a brush to stand up when removing acidified flock from their Carbonizer Squeeze Rolls. Jenkins' engineers designed a METLKOR brush with exposed metal parts of stainless steel and bristle of acid-resistant Nylon.

Mr. Frank B. Morrill, Chief Engineer, James Hunter Machine Co., says: *". . . we have been using Jenkins' brushes for flock removal on our Squeeze Rolls for about three years . . . They do a much better cleaning job than the brush previously used, and stand up several times longer . . ."*

This top textile machinery manufacturer has time-tested and proven the efficiency of patented Jenkins' METLKOR—the cylinder brush that lasts *many times longer* and *can be rebristled!* It can cut your brush replacement costs and do a better job, too.

If you have any standard or special brush problem, call or write: M. W. Jenkins' Sons Inc., Cedar Grove, Essex County, New Jersey.



A JAMES HUNTER CARBONIZER SQUEEZE ROLL WITH A JENKINS' METLKOR NYLON BRUSH

M. W. JENKINS' SONS, INC.

Three-Quarters' Century of Pioneering Brushes for Industry

Cedar Grove, Essex County, New Jersey

Telephone VERONA 8-5327

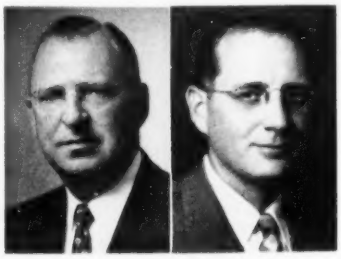
Personal NOTES ABOUT MEN YOU KNOW

Manufacturing Co., has joined Consolidated Textile Co., Martinsville, Va., as overseer of spinning, spooling, and warping.

William J. Erwin has resigned as vice-president and general manager of Riegel Textile Corp. to become president and treasurer of Dan River Mills.

M. E. Eisenberg was recently elected vice-president of Flagg-Utica Corp. He will be in charge of production of all plants except for yarn spinning. **Raymond J. Doyle** and **Wilkin C. Hughes** were elected assistant treasurers. Other officers were re-elected. **J. T. Flagg,** president of the firm, was elected to the board of directors of the Indian Head Mills, Inc.

William F. Robertson was recently elected a vice-president and director of Riegel Textile Corp. and serves also as general manager of the Ware



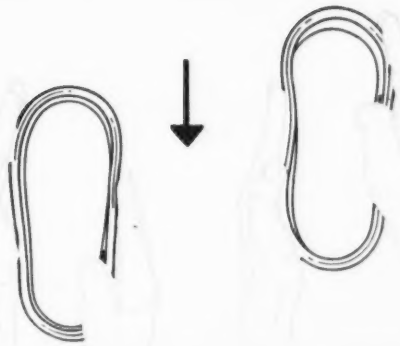
Mr. Robertson **Mr. McFeely**

Shoals Division. He is assisted at Ware Shoals by **James A. Byars,** formerly superintendent of the cotton mill at the Trion division. **Wilbur M. McFeely,** director of industrial relations, was also elected a vice-president at Riegel.

George Jackson has succeeded **James Bolton** as president of the Gosnold Mills, New Bedford, Mass. Mr. Bolton is now chairman of the board. Mr. Jackson is president also of Powdrell & Alexander, Danielson, Conn., which controls Gosnold.

Paul Fabian has been made president of Greenwich Printing and Dyeing Co. in addition to his duties as general manager. He succeeds **Ambrose T. Smith,** now chairman of the board.

Among the newly elected members



Do this twice a second for 2000 hours!

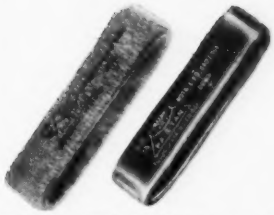
You'll get tired, very tired . . . but the leather check strap won't!

It flexes and loops two or more times a second, hour after hour, month after month, *without fatigue.* It catches the picker stick and cushions its travel to the end of the stroke. It works with the pickers and box leathers to give you proper boxing without shuttle bounce, and uniform shuttle flight on every pick.

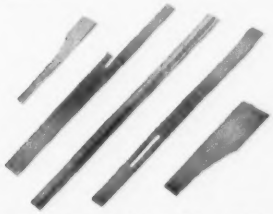
Long, exhaustive research — choice hides — the exclusive Hairitan® tanning processes: these have given to G&K Straight Check Straps the ability to take continuous punishment. Their long-life qualities mean top performance over long periods without downtime.

G&K Hairitan Straight Check Straps are another outstanding group of Orange Line Textile Leathers engineered for use on Draper and Crompton & Knowles Looms. You can get them from your distributor.

FREE CATALOG
presents the complete Orange Line of Textile Leathers for weaving on Draper and Crompton & Knowles Looms—also Aprons and Tapes.



Endless Check Straps provide controlled cushioning action for the picker stick. They are positioned perfectly for each pick, and conform to the angle of the picker stick at all points.



Boxmaster Binder and Box Plate Leathers of special HAIRITAN® Leather with smooth, catch-free edges and deep, velvety surface. Need no waxes or fillers — do not bleed and discolor the filling yarn.

Condenser Tapes, Comb and Gill Box Aprons, and Grakorub Rub Roll Aprons are producing uniform rovings with less down-time. Made of selected G&K leather specially tanned and accurately fabricated in standard and special sizes.

G&K Orange® Line Loom Leathers

1. STOP KINKY FILLING (No shuttle bounce)
2. REDUCE BANG-OFF (Perfect boxing)
3. CUT SHUTTLE COST (No hot spurs)
4. INCREASE PROFITS

MEMO: If your problem is power transmission, see your G&K Belting Distributor for:

HEART OAK — top grade oak tannage
RESEARCH® — premium quality special tannage
SPARTAN® — combination tannage: resists moisture, fumes

WRITE FOR FREE BELTING MANUAL 101

T-4

GRATON AND KNIGHT®

GRATON & KNIGHT COMPANY
Established 1851
Worcester 4, Mass.

DIXIE LEATHER CORPORATION

DIXIE LEATHER CORPORATION
Graton & Knight Company Affiliate
Albany, Georgia

portrait of a TRAVELING SALESMAN

who speaks 15 languages and has traveled the world over.

FIDELITY SKEIN REELERS are their own best salesmen—they have "told" and "sold" their own story of increased production and profit in 15 languages and 25 countries. We feel confident that they can "tell and sell" you on their advantages.

Give them the opportunity. Write today for more information or see them in operation at our plant.

Designers and Builders of Intricate, Automatic Precision Machines

FIDELITY MACHINE COMPANY, INC.

SINCE 1911

3908-18 FRANKFORD AVENUE, PHILADELPHIA 24, PA.

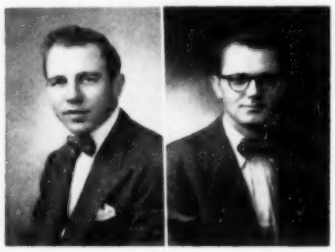
Export Dept:
25 Beaver Street, New York 4, N. Y.

Canadian Representative:
W. J. Westaway Co., Ltd., Hamilton, Ontario, Canada.

Personal NOTES ABOUT MEN YOU KNOW

to the Committee for Economic Development is **George F. Smith,** president of Johnson and Johnson, New Brunswick, N. J.

John M. Privette and **William F. Hill** have joined the quality control



Mr. Privette **Mr. Hill**

department and research laboratory of Ohio Falls Dye and Finishing Works, Louisville, Ky.

Warner H. Smith, master mechanic of the Reid Mills of U. S. Rubber Co. in Hogansville, Ga., has retired with a service record of 29 years, 5 months with the company.

The new president of the National Federation of Textiles, Inc., is **William N. Chace,** vice-president and director of Greenwood Mills, Inc. Vice-presidents are: **Andrew J. Sokol,** J. P. Stevens & Co.; **Edmon G. Luke,** Textron Incorporated; and **R. Stewart Kilborne,** William Skinner & Sons.

W. S. Egekvist was recently appointed assistant to the president of Julius Kayser & Co., New York, N. Y. He is serving as merchandise manager of the newly created infants and children's wear department.

Frank H. Lee Co., Danbury, Conn., has announced the appointment of **Raymond J. Trimpert** as director of research. **Leonard S. Little,** formerly with the organic chemicals department of E. I. du Pont de Nemours & Co., Inc., has been named associate director in charge of textiles and fibers. **Harold Tucker** is consultant on dyeing and processing.

Ralph Varrecchione has left Warwick Mills to become acting superintendent at the Philip Lieberman mill in West Warwick, R. I. He replaces Hermann Olivier, resigned.

Lincoln Mills of Alabama, Inc., has announced the retirement as general

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N.Y. SEPTEMBER, 1953

Minifil® Crepe Yarns Fulfilling Fashion Demands in New Collections Featured by Finest Dress Houses

As featured in Vogue Magazine currently giving major emphasis to Minifil®

Design by Sylvan Rich of Martini — *Design by Herbert Sondheim* — *Design by Oleg Cassini* — *Design by Hannah Troy*

Attended by widespread promotion and backed by national advertising, Avisco "Minifil" crepe yarns introduced only a year ago have achieved notable importance in the latest collections featured by many of America's leading designers and big-volume dress houses.

Based on the widespread interest in "Minifil," American Viscose Corporation has published a section in the current issue of Vogue Magazine. The first page tells consumers the specific advantages they may expect from "Minifil." Succeeding pages present important new fashions created with "Minifil" yarns by Hannah Troy, Herbert Sondheim, Oleg Cassini, and Sylvan Rich of Martini.

A complete promotion kit has been provided for retailers. It includes mats, window displays, sales training material, publicity, and radio and TV scripts, reprints of ads and editorial material. It is being used by key stores throughout the country. All Saks Fifth Avenue stores are featuring the promotion.

The creation of "Minifil" yarns in anticipation of "the crepe look" is another instance of Avisco's close cooperation with the textile industry. "Minifil" yarns have met the industry's demands for "something new in crepes." All indications make it appear that these distinguished fabrics are headed for even greater popularity.

MAKE USE OF *Avisco*®
4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's first producer of man-made fibers
RAYON · ACETATE · VISYON™ · FILATEX®

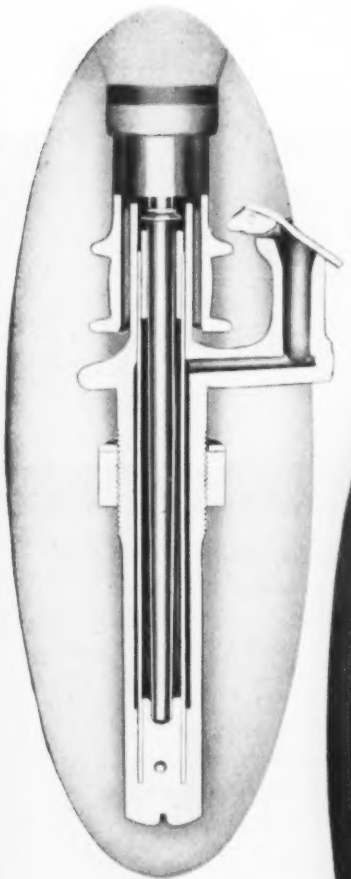
Sales Offices: 350 Fifth Avenue, New York 1, N.Y.; Charlotte, N.C.; Philadelphia, Pa.; Providence, R.I.

*TMC & CCC

You can reduce spinning costs

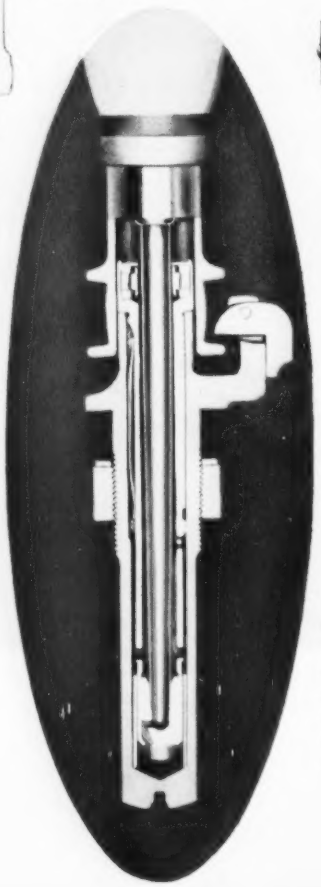
with Gulfspin,

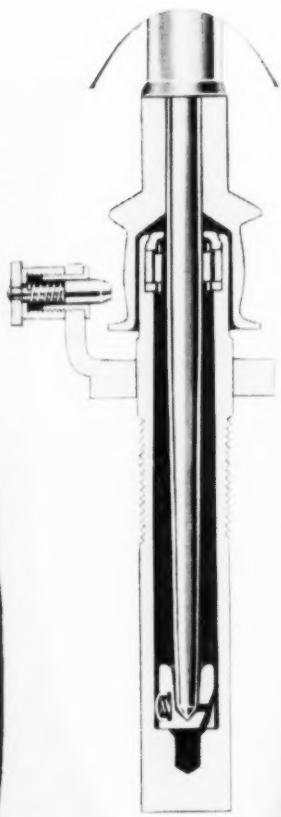
the only spindle oil that



Spindle with sleeve-type bearing. Because it will not thicken in service, Gulfspin keeps power consumption low.

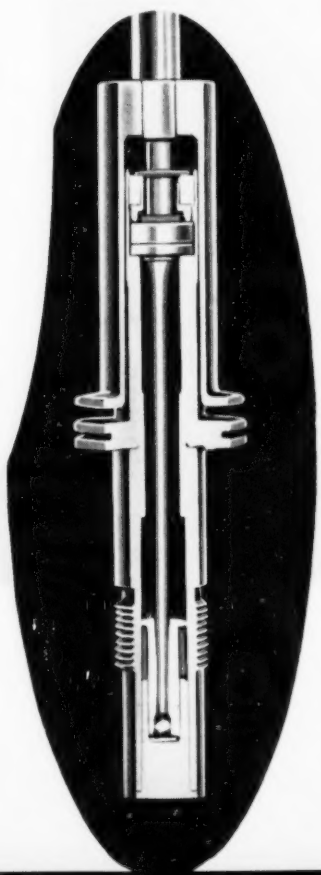
Spindle with roller bearing. Gulfspin prevents rusting and wear, reduces ends down.





Spindle with spring-type vibration dampening device. Absence of sludge with Gulfspin insures proper dampening at all times.

Sealed spindle with roller bearing at top and plain foot-step bearing. Gulfspin's high resistance to oxidation and deterioration makes it ideal for this application.



1 Keeps spindles and bolsters clean . . . no deposits of any kind

Gulfspin works three ways to keep spindles absolutely clean. First, it has the inherent ability to resist sludge formation—it's oxidation stabilized. Second, Gulfspin prevents sludge and other fine contaminants from depositing on spindle parts. Third, Gulfspin provides effective protection against rust, especially important in cast-iron bolsters where rusting causes bolster wear and discoloration of the lubricant.

Because there are no sludge deposits with Gulfspin, spindle vibration is kept to a minimum and dampening devices function normally. Gulfspin also has excellent oiliness characteristics, which materially reduce the rate of wear and prevent enlargement of spindle clearances.

This kind of performance adds up to smooth spindle performance, less vibration, fewer ends down, and rock-bottom maintenance costs.

2 Prevents any increase in power consumption . . . does not thicken in service

When we remember that spinning frames may consume as much as 60% of the total power used by a textile mill, it is evident that appreciable savings in power consumption here are worth while.

For spindle lubrication, equipment manufacturers and lubricant suppliers recommend oils of low viscosity which will have the necessary film-forming properties and dampening effects. But what if this carefully selected viscosity increases appreciably in service when it comes in contact with dirt, lint, water, and oxygen? Ordinary spindle oils often thicken after a few months' service and a viscosity increase of 10 to 20 Saybolt Seconds may result.

Such an increase in oil viscosity results in a power increase of about 1 watt per spindle, 200 watts per frame, 20,000 watts per 100 frames! Converted to dollars and cents, this might total a substantial sum.

Save on power with Gulfspin!

GULF INDUSTRIAL LUBRICATION

Gulf Oil Corporation · Gulf Refining Company
1934 Gulf Building, Pittsburgh 30, Pa. TI

Please send me, without obligation, a copy of your pamphlet entitled "Gulfspin."

Name .....

Company .....

Title .....

Address .....

X-Series

33% Less grade required on gravity lines!

The NEW low-friction, extra quiet, high efficiency BEARING for CONVEYOR ROLLS. Semi-precision construction, yet low in price.

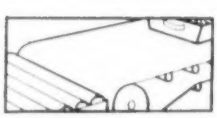
Developed by **Logan**

CONVENTIONAL TYPE BALL BEARING. Arrows in this illustration indicate the unavoidable friction when the balls are in contact with each other.

LOGAN X-SERIES BALL BEARING. Balls are caged in a steel container. Binding and friction caused by balls contacting each other is eliminated.

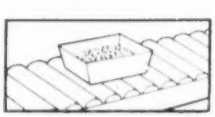
Logan leads again — with the most important bearing development for conveyor rolls in twenty years. Now available at about same price as regular conveyor bearings. Note: 33% less grade required on gravity lines. Write for details.

Write for folder on X-Series, today



For Belt Conveyors

For Live Roll Conveyors



For Roller Conveyors

LOGAN CO., 206 CABEL ST., LOUISVILLE, KY.

Personal NOTES ABOUT MEN YOU KNOW

manager of **Phil W. Peeler.** He will continue as secretary and a director. Succeeding him as general manager is **J. W. O'Neal,** formerly with Pacolet Manufacturing Co.

Allen Jones is now general superintendent at Muscogee Manufacturing Co., Columbus, Ga.

Charles W. Russell has joined the Memphis staff of the National Cotton Council as a market investigator and analyst in the field of industrial textile uses.

The Schwarzenbach Huber Co. has announced the election of **Robert Zoelly** as vice-president in charge of

Mr. Zoelly

production. He has been in charge of mill operations while serving as purchasing agent.

Paul J. Gebert has joined the staff of the Philadelphia Textile Institute in the newly created post of registrar. He was formerly registrar at Muhlenberg College.

William J. Prendergast has succeeded Thomas E. Prendergast, now treasurer, as president and general manager of William H. Prendergast Mills, Inc. **Charles R. McCabe** has been made vice-president and secretary, and the new assistant treasurer is **Laurence F. Prendergast.**

Primary Textiles Institute, Toronto, Ontario, has announced the appointment of **Cyril F. Woodward** as president and George H. Carr as vice-president. Mr. Woodward is vice-president and managing director of Grout's Limited; Mr. Carr is president of Julius Kayser Limited.

E. S. Bennett, who has been assistant superintendent at the Union plant of the Union-Buffalo Mills, was recently named head of central rechecking department, fabric produc-

HOUGHTON WARP SIZE CHECK-UP TEST being made by taking samples of unsized warps and warps sized by various formulas off the slasher. These will be sealed in air-tight jars and sent to the Houghton laboratory; a complete report is then submitted to the mill.

Houghton POWDERED HOUGHTO-SIZE 475

reduces warp room costs 4 ways

1. SIMPLIFIES HANDLING—Nothing but starch to add to this newly-developed one-piece powdered sizing agent.

2. REDUCES KETTLE COST—Far less sizing compound is needed in your warp size formulation.

3. HAS BETTER BINDING PROPERTIES—Houghto-Size 475 reduces shedding on your slasher and loom.

4. LOWERS PRODUCTION COSTS— Provides sized warps that weave with maximum efficiency.

HOUGHTO-SIZE 475

. . . a product of

E. F. HOUGHTON & CO.

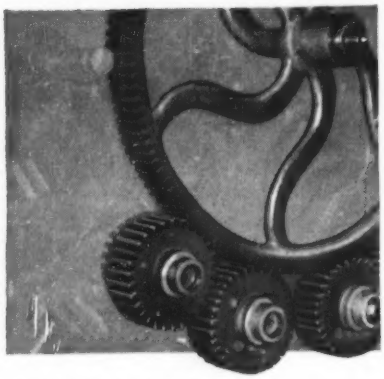
PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO

Ready to give you on-the-job service . . .

*Ask the Houghton size specialist to make a size check-up test in your mill. It will prove Houghto-Size 475 economy. *E. F. Houghton & Co., Philadelphia 33, Pa., or Charlotte, N. C.*

. . . From SPARTANBURG, S. C.

TEXTILE NEWS



CELORON GEARS

. . . reduce wear on larger, more expensive gear in this textile printing machine. Prior to the use of Celoron, metal gears had to be replaced after one to two months' operations. But, since installing nine Celoron Gears over a year ago, there has been no wear on the main gear, no replacement of the Celoron Gears. C-D-F Celoron has high impact strength, excellent resistance to heat, oil, and water. For gears that are silent in operation . . . with uniform strength in every tooth . . . get C-D-F Celoron. *Ask your gear cutter for Celoron . . . always in stock at C-D-F Spartanburg, S. C.!*

CELORON POT-EYE

Here's a low-cost molded product made from C-D-F Celoron. This pot-eye is extremely smooth and strong . . . resists wear, never corrodes. Has excellent resistance to high heat and moisture. Thousands of similar, low-cost parts can be produced by C-D-F . . . who has the know-how, the equipment to mold and machine plastics for any use.

Write now for C-D-F Celoron catalog with specifications and horsepower ratings.

ALL PRODUCTS OF

Continental Diamond Fibre Company

NEWARK 11, DELAWARE

. . . with Textile Headquarters at 834 Hayne Street, Spartanburg, South Carolina.

Call Spartanburg 3-6397 for DILECTO and DIAMOND FIBRE materials handling equipment . . . trucks, boxes . . . loom parts . . . top-speed shipments of CELORON silent gear blanks . . . friendly service from your C-D-F sales engineer.

Personal NOTES ABOUT MEN YOU KNOW

tion division, of United Merchants and Manufacturers, Inc. His headquarters will be in Union, S. C., where the central rechecking department has been moved from New York City. At the Statesville, N. C., plant of United Merchants, **Wayne D. Cash** was promoted to foreman of the twisting department. At Clarkesville, Ga., **Robert W. Masters** was promoted from smash hand, second shift weave room, to cloth room overseer, second shift.

Carl Riel has joined the New England Print and Dye Works, Assonet, Mass., in a technical capacity. He was with Precision Printers, Inc., Fall River, Mass.

Promotions at Opelika (Ala.) Manufacturing Corp. include: **W. H. Scroggins,** from overseer of weaving to superintendent; **F. N. Moore,** from second hand to overseer weaving; and **Bennie Hunsinger,** from loom fixer to second hand.

Opp and Micolas Cotton Mills, Inc., Opp, Ala., has announced that **Joe D. Winningham** is now an assistant overseer in the weave room at Opp Mill; **J. L. King** is head overseer of spinning; and **Garland F. Whisonant** is assistant overseer of weaving at Micolas.

New resident manager of Pacific Mills' Halifax (Va.) Mills is **George Smith,** formerly with Botany Mills and Arlington Mills. He succeeds **Paul C. Beatty,** now assistant southern manager of Pacific's worsted division.

Peter P. Haynes is now a vice-president of Sheraton Mills, Inc., division of Frank Ix & Sons.

Lee Waterman, a vice-president and director since 1951, has been appointed administrative vice-president of Alexander Smith, Inc., White Plains, N. Y.

Elmer M. Templeton has resigned from Harden Manufacturing Co. to become assistant to the president of the A. M. Smyre Manufacturing Co., Gastonia, N. C.

The honorary degree of doctor of science was awarded recently to Secretary of the Army **Robert T. Stevens** by Norwich University, Northfield, Vt.

Weaver R. Medford has been promoted to master mechanic at the Buffalo Mills of United Merchants and Manufacturers, Inc., and **Luther Crawford** has been made assistant industrial engineer at the firm's Bath (S. C.) Mills.

Because of ill health, **J. Harry Johnson** has resigned as vice-president of Susquehannah Mills, Inc. **Stanley F. Banas** has been promoted to vice-president, while continuing his duties as comptroller.

Wayne J. Holman, Jr., president, Chicopee Mills, Inc., was recently elected vice-president of the marketing division of the American Management Association.

Recently elected to the board of directors of the American Society for Testing Materials was **Richard T. Kropf,** vice-president of Belding Heminway Corticelli.

Harding W. Whitney, with the firm since 1913, has retired as secretary of Berkshire Woolen Co., Pittsfield, Mass.

Wheaton Kittredge, Jr., has succeeded the late William Bullard as manager of Winslow Bros. and Smith, Norton, Mass., wool combers.

Recently elected to the board of directors of Worth Street, Inc., was **Kenneth A. Durham,** vice-president of Chemical Bank & Trust Co.

Obituaries

John S. Chaya, head of the yarn processing and weaving division of American Viscose Corp.'s textile research department.

Malcolm P. Coulman, representative for Onyx Oil & Chemical Co.

Samuel G. Davenport, 71, president and treasurer of Kali Manufacturing Co.

W. D. Dodenhoff, of W. D. Dodenhoff Co.

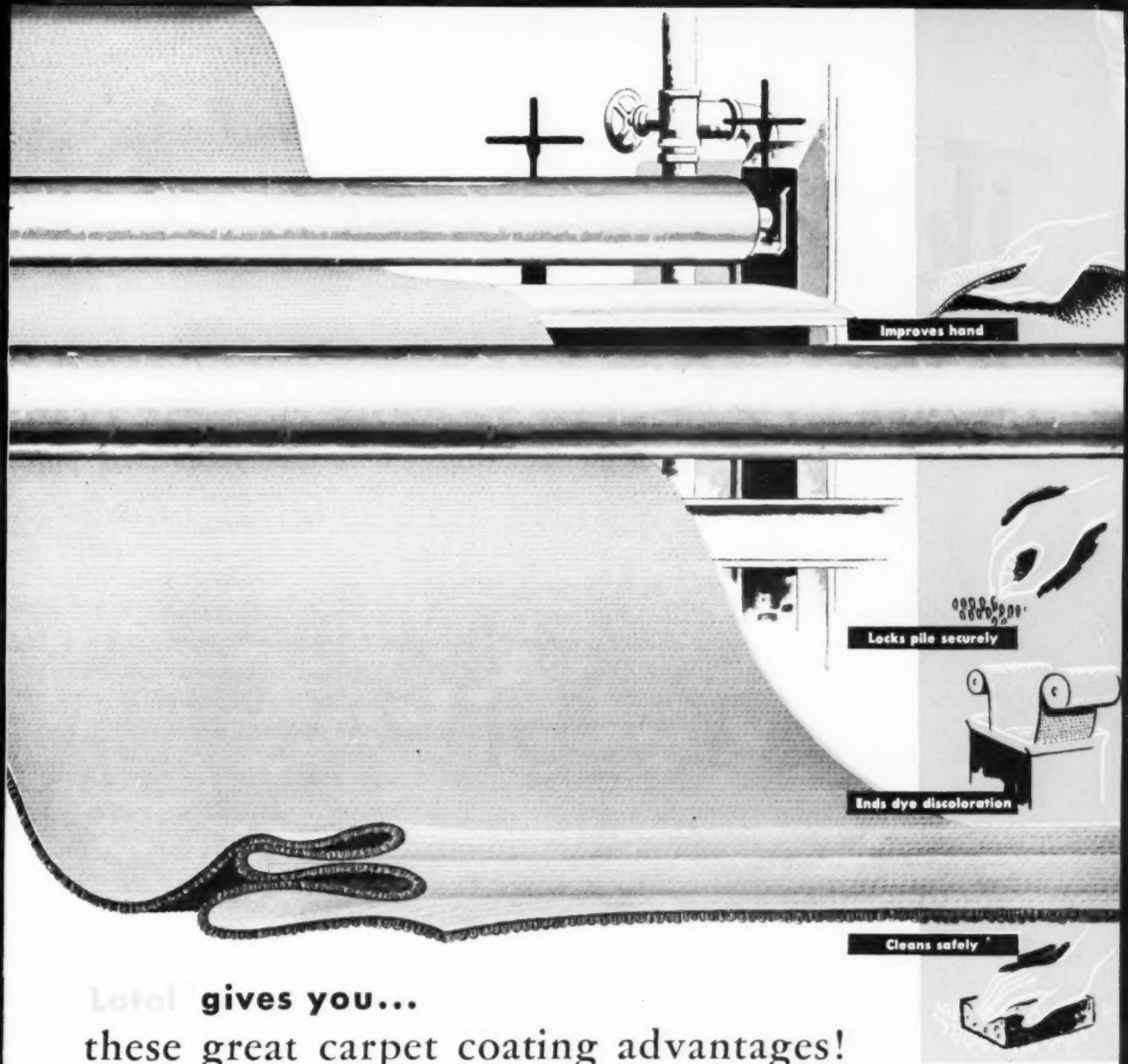
Carl C. Dudley, 67, former general manager of Crown Manufacturing Co. and Providence Braid Co.

John B. Mitchell, 75, former superintendent of the Belton (S. C.) Mills.

Eleanor Starr Taylor, 53, vice-president of the Chatham Manufacturing Co.

William H. Thatcher, 74, former executive of Standard-Coosa-Thatcher Co.

Maurice J. Tobin, former Secretary of Labor.



Lotol gives you...

these great carpet coating advantages!

1. Finer hand and body! Naugatuck's Lotol—a specially developed latex compound—gives carpets greater weight and body, improved resilience, and lasting flexibility.

2. Stronger pile locking! Lotol's superior tensile properties lock pile for life—increase locking strength—prevent raveling, wrinkling, and fraying.

3. Outstanding resistance to dye bath! Lotol has minimum effect on dye shades—withstands as much as 8 hours in boiling dye without any discoloration or breakdown.

4. Excellent cleanability! Lotol-backed carpets can be cleaned time and time again without danger of shrinking, odor, or other harmful effects.

Lotol compounds—proven in paints, textile and leather treatment, paper impregnation, and dozens of other uses—are just one of many reasons why Naugatuck is your finest source of latices, for bonding, coating, dipping, or any latex need.

Find out more about Lotol and how it can help you produce a finer carpet, more economically. Write to address below.

Naugatuck Chemical

315 ELM STREET
NAUGATUCK, CONNECTICUT

Division of United States Rubber Company

BRANCHES: Akron • Boston • Charlotte • Chicago • Los Angeles • Memphis • New York • Philadelphia
IN CANADA: Naugatuck Chemicals, Elmira, Ontario

This new machine is

Ten years ago, Textile engineers set to work to design a completely new Reading Full-Fashioned Knitting Machine.

This ten-year program called for the evaluation of every part in the existing Reading Machine — the perfection of cam motions, strengthening of structural parts, reducing vibration, simplifying performance.

Men who had spent a life-time in the development of high-speed precision machines — machinists, metallurgists, machine designers — all made important contributions. These men worked to closer tolerances than ever before in order to build a high-precision machine that would operate at greatly increased speeds . . . smoothly, effortlessly.

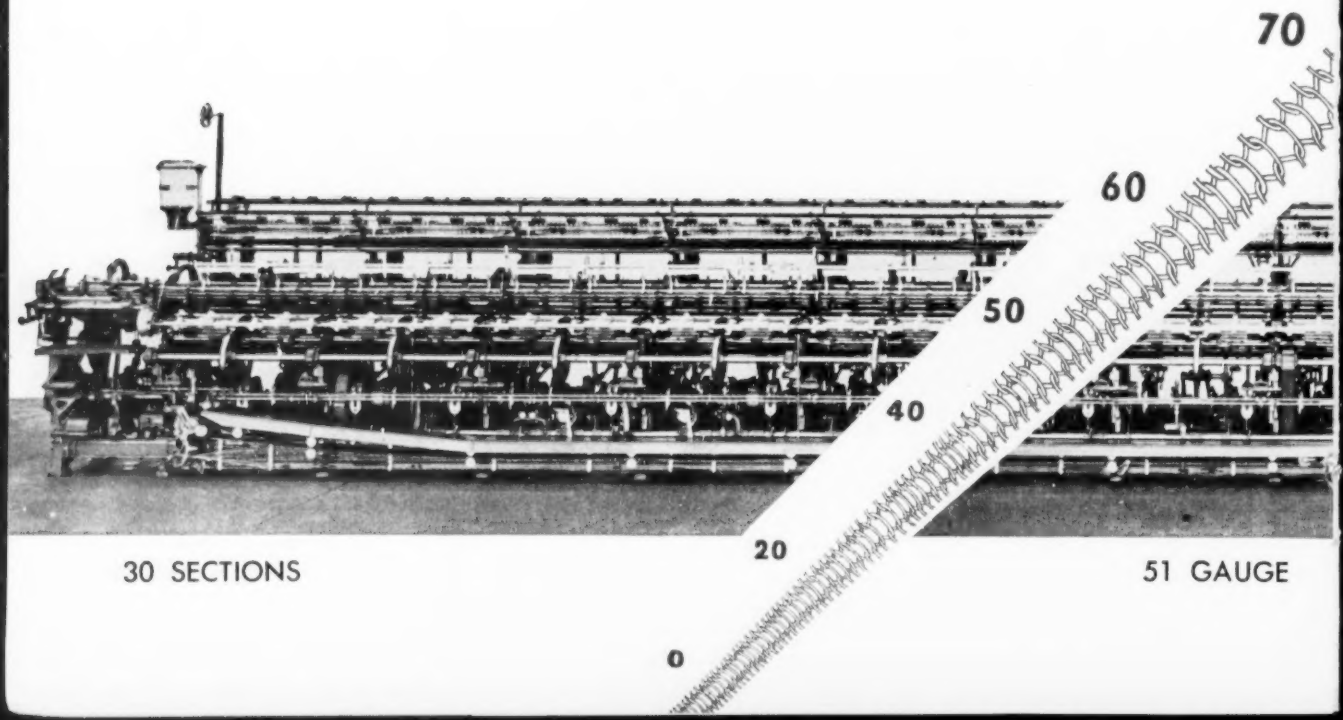
In 1946, when the existing Reading Machine was setting the pace in the production of 51-gauge full-fashioned nylon stockings, the machine redesign program was well under way.

In 1951, when the Reading Machine was the talk of the industry on 60-gauge full-fashioned nylon stockings, we were not quite ready with the completely new machine.

Now in 1953, all of the experimenting has been done, and Textile Machine Works is proud to present the "Reading 100" Full-Fashioned Knitting Machine. It knits 100 courses per minute . . . It's the fastest multiple-section full-fashioned knitting machine ever built. On 60 and 66-gauge constructions, the new "Reading 100" is operating 25 per cent faster than equipment now in use.

The "Reading 100" is a machine in the true Textile Machine Works tradition.

That's why we say that the brand new "Reading 100" is actually 10 years old . . . and we're proud of it.



10 years old

100

95

90

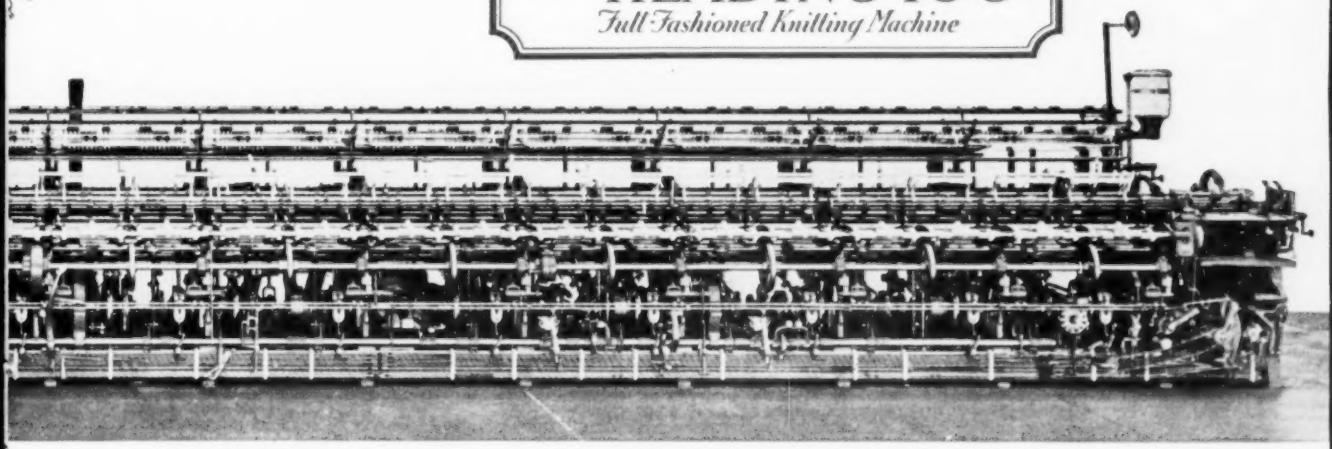
85

80

75

100 courses per minute

The "READING 100"
Full-Fashioned Knitting Machine



60 GAUGE

66 GAUGE

TEXTILE MACHINE WORKS
READING, PENNA., U. S. A.

What the TEXTILE MILLS are doing

Harry F. Goldman, president of **Allen Knitting Mills,** has announced that by mid-1954 his firm probably will be 100% on "Redmanized" knit fabrics. He has used both TV and magazines to bring the story of shrink-resistant processing to the consumer, and other efforts to publicize this process have caused the facilities at the firm's new plant in Richmond Hill, Pa., to be further expanded.

The American Felt Co. has issued a new catalog showing samples of 47 available types of wool felt. It was prepared in conformity with a U. S. government bulletin "Commercial Standard 185-52 Wool Felt—A Recorded Voluntary Standard of the Trade," prepared by the Department of Commerce. The firm is also producing Dynel felt and plans large commercial output of this new material.

Formal dedication ceremonies and an open house for the general public marked the opening of the **American Thread Co.'s** new finishing plant at Sevier, N. C. The building is a single story of 500,000 sq ft floor space, with the interior designed to provide maximum employee safety and comfort. Harvey Eastman, previously manager of the firm's Bristol, Tenn., operation, has been made general manager of the new plant. He has been with the company since 1940.

Bemis Bros. Bag Co. has discontinued operations of its textile bag mill in Jacksonville, Fla., and has under construction a building for warehouse and office service in Wilmington, Calif. The branch plants at Memphis, Tenn., and New Orleans, La., are being expanded.

Rocky Mount, N. C., is the new home for the purchasing and technical departments of **Sidney Blumenthal & Co., Inc.** The move was made because the preponderance of the firm's fabric production is now in North Carolina. Small staffs will be retained in Shelton, Conn.

J. L. Burn and his son, **W. K. Burn,** have leased the Monroe County Fair Administration Building at Madisonville, Tenn., for operation of a hosiery mill for manufacture of anklets.

The **Cashmere Corp. of America** has purchased 33 acres of land near Weaversville, N. C., for construction of a sweater manufacturing plant. The initial building will be used for a pilot plant, later to be expanded into a regular commercial mill. The cost is reported to be about $150,000.

Damage amounting to nearly $100,000 resulted from a recent fire at **Cayuga Cordage Manufacturing Co.,** Auburn, N. Y.

Eight new winders for dye tube preparation were recently installed by **Central Yarn and Dyeing Co.,** Gastonia, N. C. These will enable processing of spun synthetic yarns to

NON-FLUID OIL
TRADE MARK REGISTERED

Stays Off The Goods

There is no need to tolerate the heavy loss of oil-spoiled goods when you can buy a lubricant that is made to stay in loom bearings and do its job—instead of throwing or spattering.

Yes, drip-less, waste-less NON-FLUID OIL stays *off* warps and *in* the bearings of all models and makes of looms, keeping them in steady operation and giving highest output of perfect cloth to pay for itself many times over in "oil spot" prevention.

NON-FLUID OIL increases production because it minimizes damage to goods caused by leaking and "cam-spatters".

Grade No. A-00000 NON-FLUID OIL is recommended for the general oiling of looms. Seeing is believing —send for Bulletin T-20 and a free testing sample to prove that NON-FLUID OIL gives cleaner, better loom lubrication at less cost per month.

NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVE., NEW YORK 17, N. Y.
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Southern District Manager: Lewis W. Thomason, Jr.
Charlotte, N. C.

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Columbus, Ga.	St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

COTTON IS MONEY DON'T WASTE IT

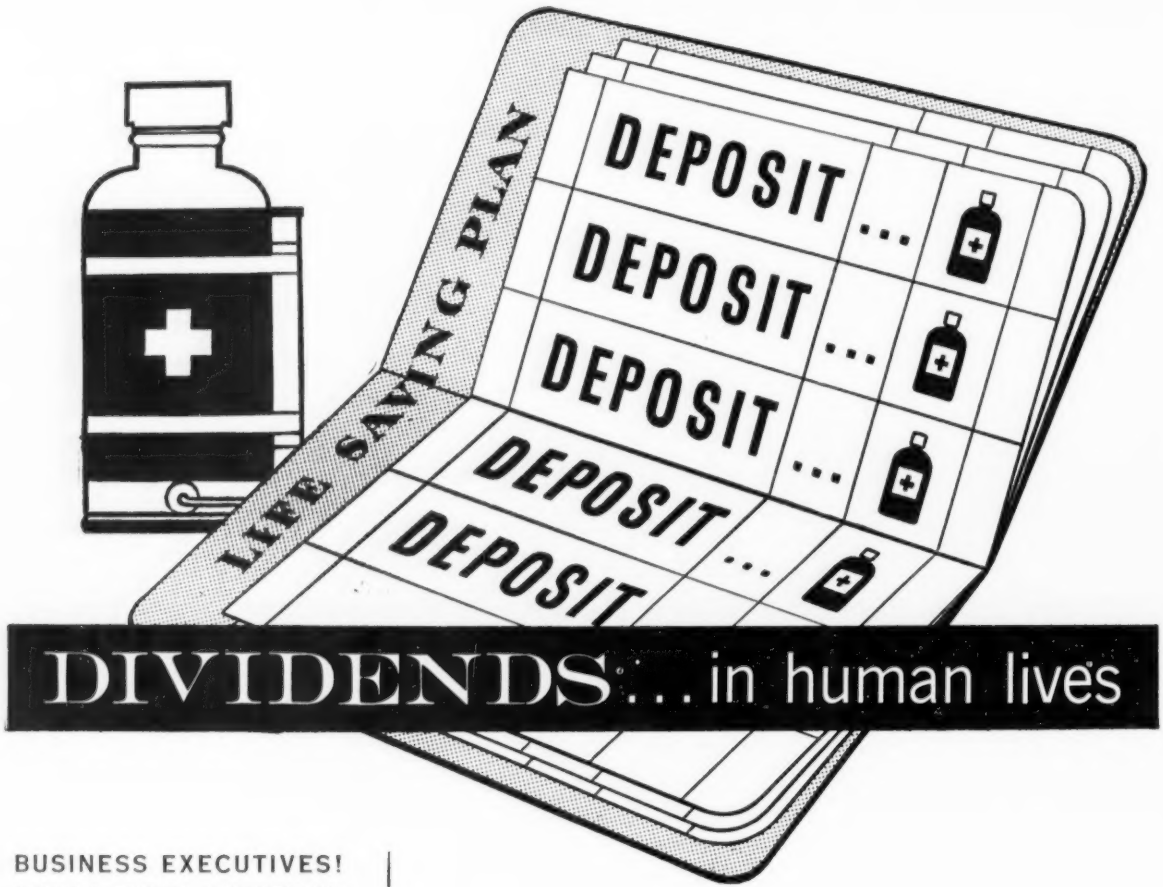
Every bit of spinnable fibre you see in your waste represents a loss of money!

CEN-TENNIAL'S SRRL OPENER is designed to eliminate this waste . . . and does an excellent job of it.

For instance: one mill (we'll give you the name on request) reports a 14.3% decrease of spinnable fibre in waste which amounted to a yearly saving of $22,400 on cotton stock. The point is, CEN-TENNIAL can save your cotton and save you money . . . CAN YOU AFFORD *NOT* TO EQUIP YOUR OPENER ROOM WITH THE CEN-TENNIAL OPENER?

CEN-TENNIAL
COTTON GIN COMPANY

Columbus, Georgia



DIVIDENDS... in human lives

BUSINESS EXECUTIVES!

CHECK THESE QUESTIONS

If you can answer "yes" to most of them, you—and your company—are doing a needed job for the National Blood Program.

- ◯ HAVE YOU GIVEN YOUR EMPLOYEES TIME OFF TO MAKE BLOOD DONATIONS?
- ◯ HAS YOUR COMPANY GIVEN ANY RECOGNITION TO DONORS?
- ◯ DO YOU HAVE A BLOOD DONOR HONOR ROLL IN YOUR COMPANY?
- ◯ HAVE YOU ARRANGED TO HAVE A BLOOD-MOBILE MAKE REGULAR VISITS?
- ◯ HAS YOUR MANAGEMENT ENDORSED THE LOCAL BLOOD DONOR PROGRAM?
- ◯ HAVE YOU INFORMED EMPLOYEES OF YOUR COMPANY'S PLAN OF CO-OPERATION?
- ◯ WAS THIS INFORMATION GIVEN THROUGH PLAN BULLETIN OR HOUSE MAGAZINE?
- ◯ HAVE YOU CONDUCTED A DONOR PLEDGE CAMPAIGN IN YOUR COMPANY?
- ◯ HAVE YOU SET UP A LIST OF VOLUNTEERS SO THAT EFFICIENT PLANS CAN BE MADE FOR SCHEDULING DONORS?

Remember, as long as a **single** pint of blood may mean the difference between life and death for **any** American . . . the need for blood is **urgent!**

NATIONAL BLOOD PROGRAM

America's blood bank needs **more** blood, **now**. Be a regular depositor and know that your dividend is saving a life of some American—somewhere.

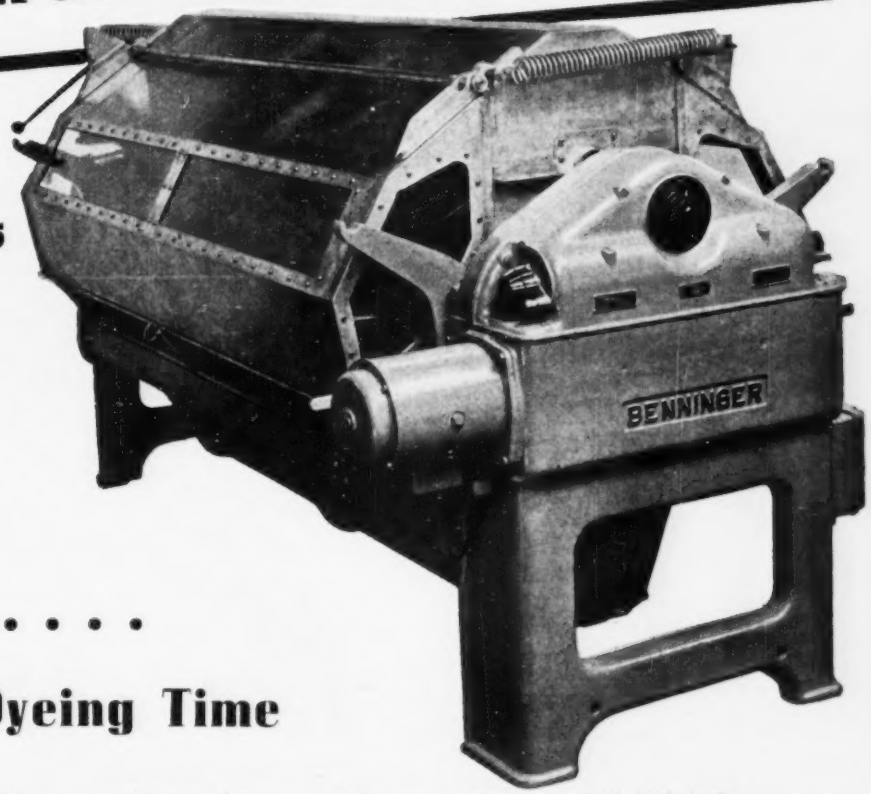
It may be a soldier shot down in battle, suffering from **shock**. Or someone here at home, sick and in dire need of new blood to restore life. A mother in childbirth, or a child in an accident.

America must give. America is **you**. Won't you call your Red Cross, Armed Forces or Community Blood Donor Center right now, for an appointment?

GIVE BLOOD

...give it again and again

LOWER DYEING COSTS
BETTER DYEING RESULTS
with the Benninger Dye Jig



Creaseless Runs on Delicate Fabrics . . . . .

Shorter Dyeing Time

Check the lowered operating costs and increased production of the Benninger Dye Jig against your present dyehouse equipment. Then compare the Benninger Jig's clear, bright colors, its easy matching of shades, its end-to-end and selvage-to-selvage uniformity.

Performance-proved advantages include:

(1) Automatic reversing and stopping device, with self-acting passage counter. Cloth running speed is practically constant. One man can operate six machines.

(2) Adjustable, constant, but slight tension.

(3) Oscillating balance expanding device for creaseless runs on any cloth.

(4) Squeezing device for extraction of fabric before removal from jig. Shortens dyeing time.

Stainless steel enclosure prevents selvage oxidation, cuts steam consumption, eliminates fogging of dyehouse. Easily removable for feeding and unloading.

Open type construction available if desired.

Benninger Dye Jigs handle cotton, silk or synthetic fibres, staple or mixed fabrics. They are made in 51¼", 63" and 75" widths, for all standard requirements. Parts and service are readily available. Let a Butterworth engineer show you how you can step up production, improve quality, in your dyehouse. Write for full details.

H. W. BUTTERWORTH & SONS CO.
Bethayres, Pennsylvania

1211 Johnston Building, Charlotte, North Carolina
187 Westminster Street, Providence, Rhode Island

Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing & Embossing : : Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

BUTTERWORTH

Whatever your wet-processing need—
DYE—BLEACH—
FINISH—
NATURAL or
SYNTHETIC
FIBERS—FABRICS—
you'll meet it
more efficiently with
Laurel
textile specialties
. . more economically and more profitably, too. Since 1909, market-wise textile mills have found Laurel laboratory- and mill-tested processing specialties give speedier production, better finish — more salable fabrics. We invite you to see for yourself how these dependable Laurel products make your processing dollars go farther. Let us arrange a practical demonstration in your plant. Write or call us today.
PROCESSING HEADLINERS
Laurel Hydrosol
Laurel Synthetic Detergents
Laurel Hydrocop & 3B Softener
Laurel Anti-Foam AF
Laurel Anti-Static Compound
Laurel Hosiery Finishes
Laurel Resin Finish P50
textile
soaps, oils, finishes
Laurel
SOAP MANUFACTURING CO., Inc.
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ESTABLISHED 1909
2603 E. Tioga Street
Philadelphia 34, Pa.
Warehouses
Paterson, N. J.
Chattanooga, Tenn.
Charlotte, N. C.

What the TEXTILE MILLS are doing

be kept separate from processing of filament yarns, according to the management.

The recently chartered **Clairellen Hosiery Co., Inc.,** will operate a mill for manufacture of women's hosiery. Claude de Barros and P. E. Renner, of Cleveland, Tenn., are the incorporators.

Craftsmen Finishers, Inc., recently chartered, has leased a building in Concord, N. C., and established a hosiery finishing mill. The firm is headed by M. W. Nixon, president, and Harold T. Sumner, vice-president.

A social insurance plan which covers hospitalization and surgical benefits, cash payments upon hospitalization, a $1000 life insurance policy, and option to extend coverage to employee's entire family, has been inaugurated at **Delaine Worsted Mills,** division of Associated Spinners, Inc., Gastonia, N. C.

An expansion program is in progress at **Dye Masters, Inc.,** Inglewood, Calif., which will include installation of equipment for increase in present output.

A textile dyeing and finishing mill will be operated by the recently organized **Edra Finishing Corp.** Charles Marr, 185 Montague St., Brooklyn, N. Y., is attorney and representative.

The millionth electric blanket to be manufactured by **Fieldcrest Mills** came off the production line recently. It had a special gold-sprayed control and was packed in a specially made mahogany case. The blanket was then taken to Chicago and presented to Chairman Hughston M. McBain at Marshall Field & Co. Mrs. Ethel Gilley, a member of the electric blanket mill when it began operation, Mr. Will Patterson, oldest employee of Fieldcrest Mills in point of service, and Mrs. Patterson were given an expense-paid trip to Chicago to deliver the blanket.

Construction of a new mill near Maiden, N. C., is being planned by **Globe Knitting Mills,** Norristown, Pa., owned by Rambo & Regar, Inc.

Goodyear Clearwater Mill No. 2, Rockmart, Ga., has under construction an addition to the plant, to cost approximately $1,500,000. The new

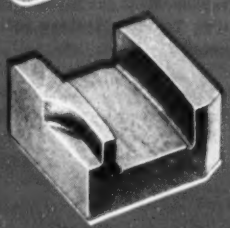
an easy way to cut your production costs

OILITE does it—

with FINISHED MACHINE PARTS

machining this segment costs — $.70

OILITE segments cost — $.08



machining this mating slide costs — $1.30

OILITE slides cost — $.07

Other Advantages Include:

- No investment in machine tools
- No costly tooling programs
- Releases skilled manpower to other jobs
- No material supply problems

CHRYSLER CORPORATION

AMPLEX DIVISION

DETROIT 31, MICHIGAN

FIELD ENGINEERS AND DEPOTS THROUGHOUT UNITED STATES AND CANADA

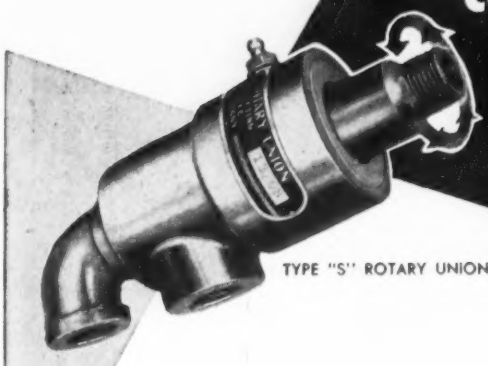
Oilite Products Include: Bearings, Finished Machine Parts, Cored and Solid Bars, Permanent Filters and Special Units.

6334

ROTARY UNION

(REG. TRADE MARK)

a revolving steam connection



PIPE SIZES 1/4" THROUGH 3"

TYPE "S" ROTARY UNION

The Engineer's Friend*

The ROTARY UNION is the only revolving steam connection that you can install in 15 minutes and then forget about. We *guarantee* one year's perfect service without mechanical maintenance of any sort, and many ROTARY UNIONS have given three or more years of such service.

Every ROTARY UNION comes complete with flexible metal hose connections, ready for installation on your dry cans, slashers, calenders, embossers, printing, or coating machines. If you haven't tried them, order a set today for any one of your machines, and compare their service with any other steam connection. You'll agree that they are the engineer's friend.

Contact our nearest office for consultation or write Dept. 9T for our catalog.

*Production men like them too. They cut down-time due to sealing failures to just about zero.

"Where *Good Connections* Count" ®

PERFECTING SERVICE COMPANY

332 Atando Avenue (Home Office and Factory) Charlotte, N.C.

Atlanta, Chicago, Cleveland, Philadelphia, Providence, New York, Montreal, Toronto

What the TEXTILE MILLS are doing

addition will be used for rubberizing rayon and nylon tire fabric. The mill is owned by Goodyear Tire and Rubber Co.

The **Jefferson (Ga.) Mills'** first open house program on July 2 drew scores of mill employees, members of their families, townspeople, and visitors from nearby communities. These people were taken on tours conducted by foremen and overseers dressed in uniforms made of fabric produced in the mill. They learned that Jefferson Mills consumed a total of 15,000 bales of cotton—nearly all of it Georgia-grown—last year.

Kendall Mills are observing their 50th anniversary this year. The business was founded in 1903 by Henry P. Kendall, and has grown to an annual volume of about $100 million. The southern operations have been extended to include 4000 employees.

It is reported that a branch mill at High Point, N. C., will be established by **Kramer Bros.,** Philadelphia, Pa., operating **Trimfit Hosiery Mill,** seamless hosiery, anklets, etc.

Largman, Gray Co., Philadelphia, Pa., has moved its knitting machinery to its new plant at East Greenville, Pa.

Laurel Knitting Co., Inc., recently organized, will manufacture outerwear for women. Sidney Kramer, 70 West 40th St., New York, N. Y., is attorney and representative.

Lorraine Manufacturing Co., Pawtucket, R. I., has ceased production, though no information has been forthcoming as to disposition of the plant and machinery.

Mandeville Mills, Inc., Carrollton, Ga., has begun weaving screen wire.

A one-story building, to be occupied by **Marion Mills, Inc.,** is under construction at Guin, Ala.

A license for production of Helanca stretch nylon yarn has been granted **Martin Fabrics Corp.,** 48 West 38th Street, New York, N. Y. This yarn is used in making men's stretch nylon hosiery; women's full length hosiery of the yarn has also been introduced.

Milltex Hosiery Mills, Inc., has moved its offices from Philadelphia

Whatever the

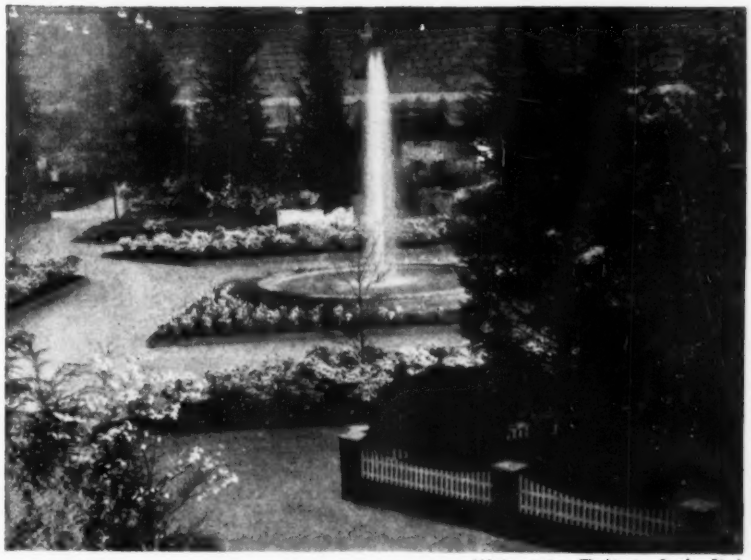
Pumping Job

WHEN YOU SPECIFY

"Buffalo"

YOU'RE SPECIFYING

SATISFACTION



(photo courtesy Washington Sunday Star)

Above, the 25' fountain produced by the No. 2 "Buffalo" SL Double Suction Pump bottom right, in Flower and Garden Show, National Guard Armory, Washington, D. C. Installation by Standard Engineering Company, Washington, D. C.

Bottom left, SL Pumps handling chilled water in a large air conditioning installation.

It isn't every day that a "Buffalo" Pump is called on to create a 25-foot fountain for a Flower and Garden Show—in fact, probably 99.99% of our pumps feed boilers, handle paper stocks or pump clear water in every conceivable commercial or industrial application.

The point is, they do those jobs well, as users can tell you.

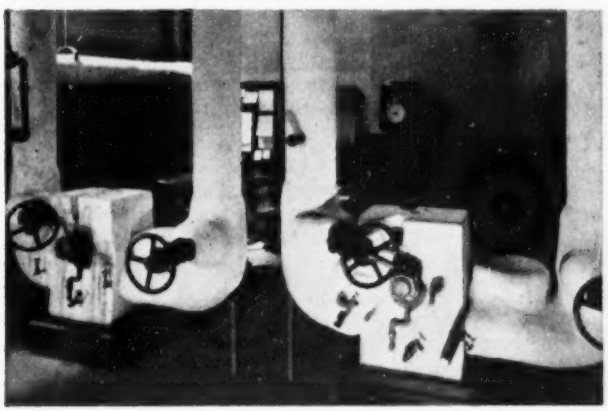
In the "Buffalo" line, you'll find: (1) The RIGHT pump. The line includes acid, rubber-lined, alloy, double-suction, single-suction, multistage, close-coupled, diagonally or horizontally split-shell, for almost any conditions.

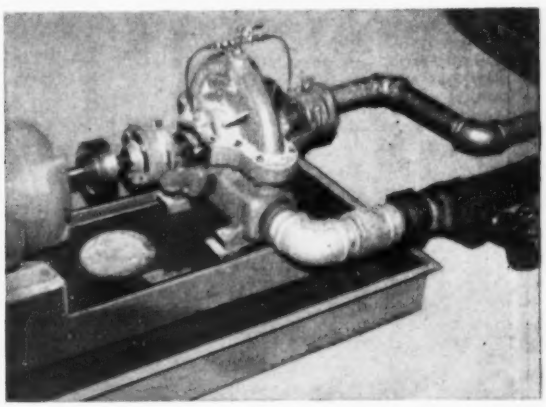
(2) Efficiency—long life. Impellers are husky, efficient enclosed type, and liquid passages are formed for least resistance.

(3) Easy maintenance. All parts are readily accessable, including impellers, stuffing boxes and bearings.

To be doubly sure that each "Buffalo" Pump will perform up to specification on the job, it must pass a load test before shipment, duplicating the actual hydraulic conditions of the job for which it is intended.

Why not put a "Buffalo" Pump on your next job—for permanently satisfactory results? Write for details.





"Buffalo"

BUFFALO PUMPS, INC.

175 MORTIMER STREET BUFFALO, N. Y.

Subsidiary of Buffalo Forge Company

Canada Pumps, Ltd., Kitchener, Ont. Sales Representatives in all Principal Cities

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

Platts'

The ORIGINAL PATENT . . .

METALLIC CARD CLOTHING

for COTTON, RAYON NYLON, WOOL AND ALL STAPLE FIBRES

* 100 YEARS EXPERIENCE

ORIGINAL SUPPLIERS TO THE U.S.A.

PRODUCTION INCREASED BY 18%. SAVING IN WAGES 22% REDUCTION IN LABOUR FORCE 33⅓% BY DOING AWAY WITH REGULAR STRIPPING & GRINDING

IDEAL FOR MAN MADE FIBRES

PLATTS' METALLIC CLOTHING PUTS THE FIBRES INTO THE WEB

SO WHY MAKE STRIPPING WASTE CHANGE TO PLATTS' METALLIC CLOTHING & SAVE THAT WASTE.

OUR TECHNICAL REPRESENTATIVE

Mr. LESLIE FIELD
230 PRINCETON Bde.
LOWELL - MASS.
Will be pleased to give Technical Information & answer your questions

AN EFFICIENT FITTING ORGANISATION

Also LARGE STOCKS FOR IMMEDIATE SERVICE AVAILABLE IN U.S.A.

U.S.A. STOCKISTS.
ASHWORTH Bros. Inc.
FALL RIVER - MASS.

PLATTS' ORIGINAL PATENT METALLIC CLOTHING GIVES A GREATER OUTPUT & MUCH BETTER YARN REGULARITY

ANNOUNCEMENT
OF THE PATENTEES & ORIGINAL MANUFACTURERS OF METALLIC CLOTHING

PLATT FRERES S.A.R.L.
108 BOULEVARD De LYON
ROUBAIX
FRANCE (NORD)

J. W. & H. PLATT LIMITED
BYRON WORKS, HARROW
MIDDLESEX - ENGLAND

What the TEXTILE MILLS are doing

to the mill at Palmyra, N. J.

Mooresville Mills have added to their terry cloth line woven authentic tartan plaids and window pane checks, to give the cloth "a year-round sales punch," according to the terry products division manager, Hugh Brown. Color and sanforizing have made the cloth a year-round fashion fabric adaptable to a multitude of uses in apparel, home furnishings, and novelties, instead of being confined to beach and bathroom use, as formerly.

The rayon weaving unit of **Morgan Cotton Mills, Inc.**, was recently sold and is expected to be replaced by a cotton unit.

12,000 sq ft warehouse space will be available when the two-story addition to the plant of **Frank S. Nelson & Co., Inc.**, Philadelphia, Pa., now under construction, is completed.

Hosiery and other knit goods will be manufactured by the recently organized **Peerless Hosiery Co., Inc.** R. P. Reade and A. P. Graham, Jr., of Durham, N. C., are principal incorporators. They also have chartered another company, **Forest Hosiery Co.**, to operate a mill for similar manufacture.

Peerless Spinning Corp., Lowell, N. C., recently completed construction of a one-story addition, for use as a picker room.

Cotton braiding and kindred products will be manufactured by the **Pepperell Braiding Co., Inc.**, New Bedford, Mass., recently chartered. Donald W. Light is president and treasurer.

In line with the current trend toward self-service in stores, and fewer salesmen, packaging of merchandise has become an important factor to entice the customer. Nashua Corp. has designed a new polyethylene wrap for the sheets and pillow cases manufactured by **Pepperell Manufacturing Co.** which is said to enhance the looks of the merchandise. Furthermore, the protection afforded by the wrapper has meant fewer markdowns of merchandise because of handling and soilage, an advantage for the retail store.

Philadelphia Carpet Co. has under construction a third story addition to

Sinclair Textile Lubricants Save You Money and Wear . . .

"No-Drip" stops yarn spoilage!

This fine oil *stays in place*. Won't creep or drip — protects yarn and roll coverings from spoilage. Apply Sinclair NO-DRIP to necks and yokes. It permits rolls to turn smoothly without drag. This provides even draft and saves wear.

"Lily-White" cuts bolster wear!

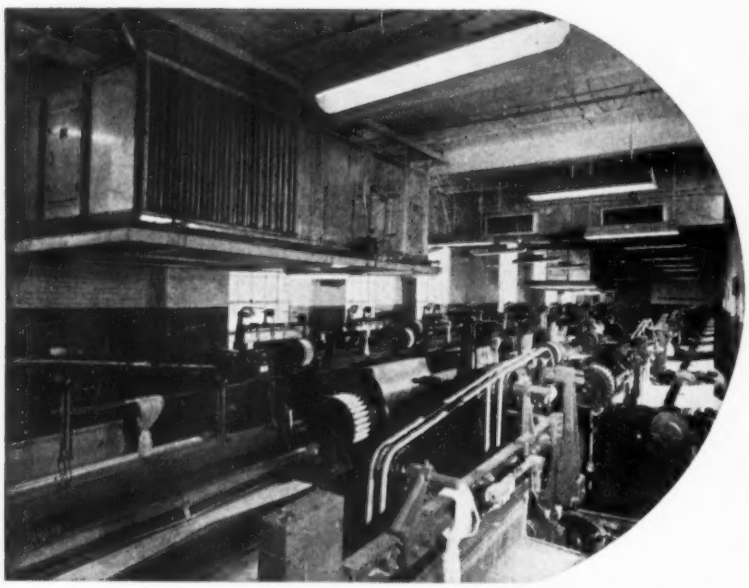
A superior oil that goes beyond saving bolster replacements. By reducing wear, Sinclair LILY WHITE Oil helps cut spindle wobble, thus reducing power demand and thread breakage and permitting use of a larger package.

These are just two of the Sinclair Textile Lubricants which are important assets in any mill. For lubrication counsel, contact your local Sinclair Representative or write Sinclair Refining Company, 600 Fifth Ave., New York 20, N. Y.

SINCLAIR
TEXTILE LUBRICANTS

You ought to try them!

New Suspended Air Washer Systems Now Available



Synthetic yarn weaving room with new WHITE suspended air washers in Grendel plant of The Abney Mills, Greenwood, S. C.

The new White suspended air washer system employs a spray generating chamber and specially designed spray generator. The unit is all aluminum construction which makes it possible to be installed in existing mills without major reinforcing construction, alteration of present building or construction of apparatus houses.

The system is designed so that it requires minimum maintenance and service. Flexibility of application makes it possible to add new units if internal load changes.

White and Company—specialists in air-conditioning—employs an efficient and competent staff of workmen for the rapid installation and servicing of air conditioning equipment for the textile industry.

Estimates and specifications furnished without obligation.

WHITE & COMPANY, INC.

AIR CONDITIONING • HUMIDIFYING • VENTILATING • HEATING

1440 S. Tryon St. P. O. Box 533 Phone 2-7719 Charlotte, N. C.

What the TEXTILE MILLS are doing

its mill, which will provide about 11,000 sq ft floor space to be used for storage service.

Play-Knit Mills, West New York, N. J., have purchased a two-story building which they have been occupying in part.

Worsted finishing equipment costing about $650,000 is being installed at **Robbins Mills, Inc.,** for the Clarksville, Va., plant's Dacron polyester fiber-and-worsted blend program.

Roosevelt Mills, Inc., has moved its Manchester, Conn., knitting mills division to Rockville, Conn., where 16,500 sq ft manufacturing space and 4,500 sq ft storage space are available. The building was formerly occupied by a division of J. P. Stevens & Co.

Plans are under way for installation of a cotton mill at **San Quentin State Prison,** to be used for manufacture of denims and kindred cotton goods. The new mill is reported to cost about $2,500,000.

Alexander Smith, Inc., is planning to acquire a mill at Clearfield and A Streets, Philadelphia, Pa., now used by C. H. Masland & Sons. It is expected that wilton carpets will be manufactured there.

Smitherman Cotton Mills, Inc., Troy, N. C., has purchased the former Kilburn Mill properties at New Bedford, Mass., with the exception of Kilburn Mill No. 1.

Philip A. Waze and E. B. Shaw have organized the firm of **Waze & Shaw, Inc.,** to operate a mill at 943 60th St., Brooklyn, N. Y. Metallic and other special yarns for knit goods service will be manufactured.

Southern Pile Fabrics Co. and **Brookline Fabrics, Inc.,** both of Greenville, S. C., have arranged for a merger, the new firm to be known as Brookline Fabrics, Inc.

Springs Cotton Mills, Inc., has announced plans for enlargement of its Grace (S. C.) Bleachery. The addition will be 800 x 130 ft, and will contain 104,000 sq ft floor space. New bleaching ranges and dyeing machines are being installed, with a capacity of over 10 million yards of cloth per week.

The mill at Chadwicks, N. Y., formerly known as **Utica Willowvale Bleach Co.,** has been presented by J.

Cut Costs
still further!
with the LOAD-GRAB and HYSTER YC-40

(Capacity 3000-4000 lbs.)

The Hyster 40 and Load-Grab has proved to be the textile industry's most effective tool for reducing cost of materials handling in warehouses, boxcars and close quarters. The Load-Grab, pioneered and developed by Hyster®, is designed to handle up to three bales at a time, holding them vertically or horizontally. The Hyster 30-40 is an entirely new lift truck with a 35 HP *water-cooled* industrial engine. Call your Hyster Dealer—let him show you how a Hyster Truck and Load-Grab can save you money ...or write for details to:

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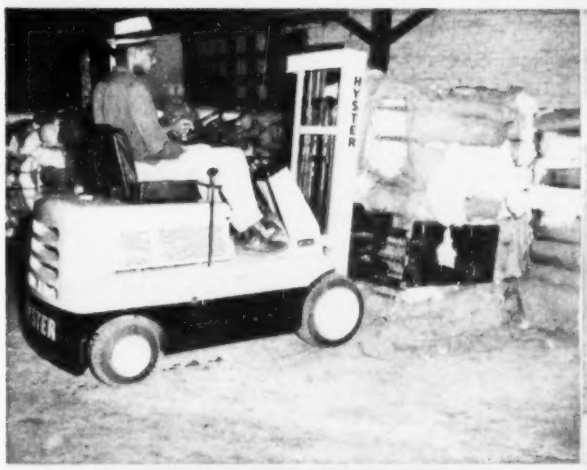
FOUR FACTORIES: Portland, Oregon; Danville, Illinois; Peoria, Illinois; Nijmegen, The Netherlands.

THERE'S PROFIT IN HYSTER POWER

MANEUVERS EASILY IN CLOSE QUARTERS

LOAD-GRAB PERMITS QUICK STACKING WITHOUT PALLETS



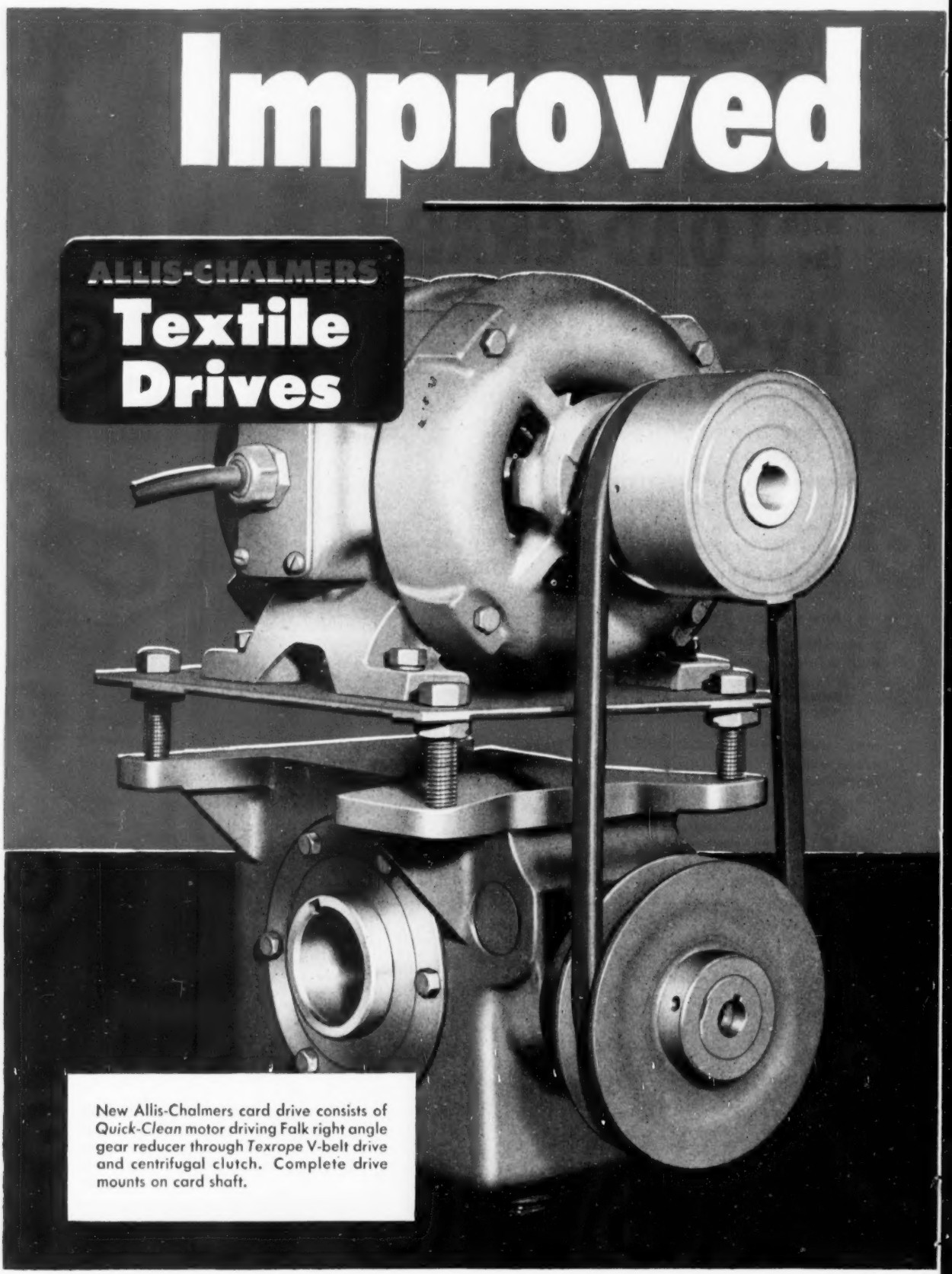
GRIPS ONE, TWO OR THREE BALES

HIGH MANEUVERABILITY IN BOXCARS

Improved

ALLIS-CHALMERS

Textile Drives



New Allis-Chalmers card drive consists of *Quick-Clean* motor driving Falk right angle gear reducer through *Texrope* V-belt drive and centrifugal clutch. Complete drive mounts on card shaft.

CARD DRIVE

NOW...more power at the shaft...more protection against lint. Outstanding performance of original unit improved by more efficient gear reducer and *Quick-Clean* motor.

ARE YOU STILL USING OVERHEAD BELT DRIVES on your cards for lack of a good card drive that can be installed at a reasonable price? Well, here is the card drive you have been looking for. The savings in lower maintenance costs, more production and higher quality goods will soon more than pay for the new drive. Think how much neater, lighter and more efficient your plant will be, too, without that forest of shafting and belting hanging from the ceiling. Check these features:

Compact — Requires practically the same floor space as an overhead belt drive. Drive is mounted directly on card shaft with torque arm to keep it in position. No strain on card arch to cause vibration or distortion.

Reduces Maintenance Costs — No heavy, expensive belts to wear out. No periodic belt dressing. The drive is practically vibrationless, which increases life of all parts and makes machine easier to keep in adjustment.

Cleaner Operation — No sticky belt dressing to catch dirt. Won't throw oil and dirt into material to cause low quality goods or rejects.

Uniform Speed — Drive unit locked tightly to shaft. Constant speed improves quality.

Safe — Small *Texrope* drive easily guarded.

Easy to Install — You don't have to move your cards to install this drive. It will fit in the same space as your present drive. And it's easy to install. Simply fit the gear reducer on the shaft and attach a torque arm to keep it in position.

Ask the Allis-Chalmers representative to show you what new card drives will do for your mill. Or write Allis-Chalmers, Milwaukee 1, Wis., and ask for Bulletin 51B7867.

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Originator of the Multiple V-Belt Drive for the Textile Industry

NEW PORTABLE SCALES • NEW COUNTING SCALES • NEW FLOOR SCALES

NEW BUILT-IN SCALES • NEW HOPPER SCALES • NEW TRACK SCALES • NEW PRINTWEIGH SCALES

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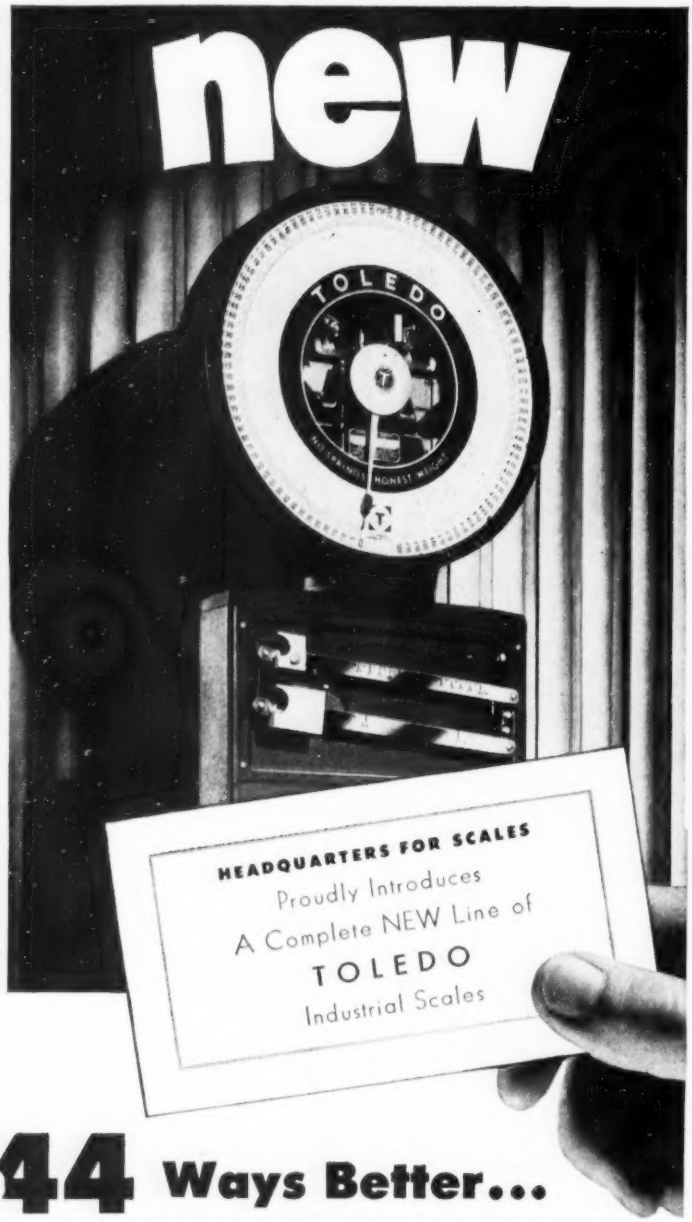

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Model 2181 — New version of the world's most widely used portable dial scale.

Today more than ever

TOLEDO®

HEADQUARTERS FOR SCALES

What the TEXTILE MILLS are doing

P. Stevens & Co. to Syracuse University. The gift includes a number of buildings and approximately 157 acres of land.

Stevens Finishing Co., Inc., recently organized, will operate a textile finishing works. The firm is represented by Arnold A. Weinstein, 261 Broadway, New York, N. Y.

Stonecutter Mills Corp., Spindale, N. C., is rebuilding and improving its dye house.

Sulloway Hosiery Mills, Franklin, N. H., have sold their mill property to Sulloway Industries, Inc., organized by local business interests.

The cost and accounting and production control offices of **Susquehanna Mills, Inc.,** have been moved to the firm's general headquarters in Sunbury, Pa. Sales and purchasing offices will remain at 404 Fourth Ave., New York.

Machinery and equipment at the mill of **Temple (Pa.) Full-Fashioned Hosiery Mills** have been sold at public auction for the reported amount of $90,000. It is believed that a great part of the knitting machinery will be sent to a mill in Canada.

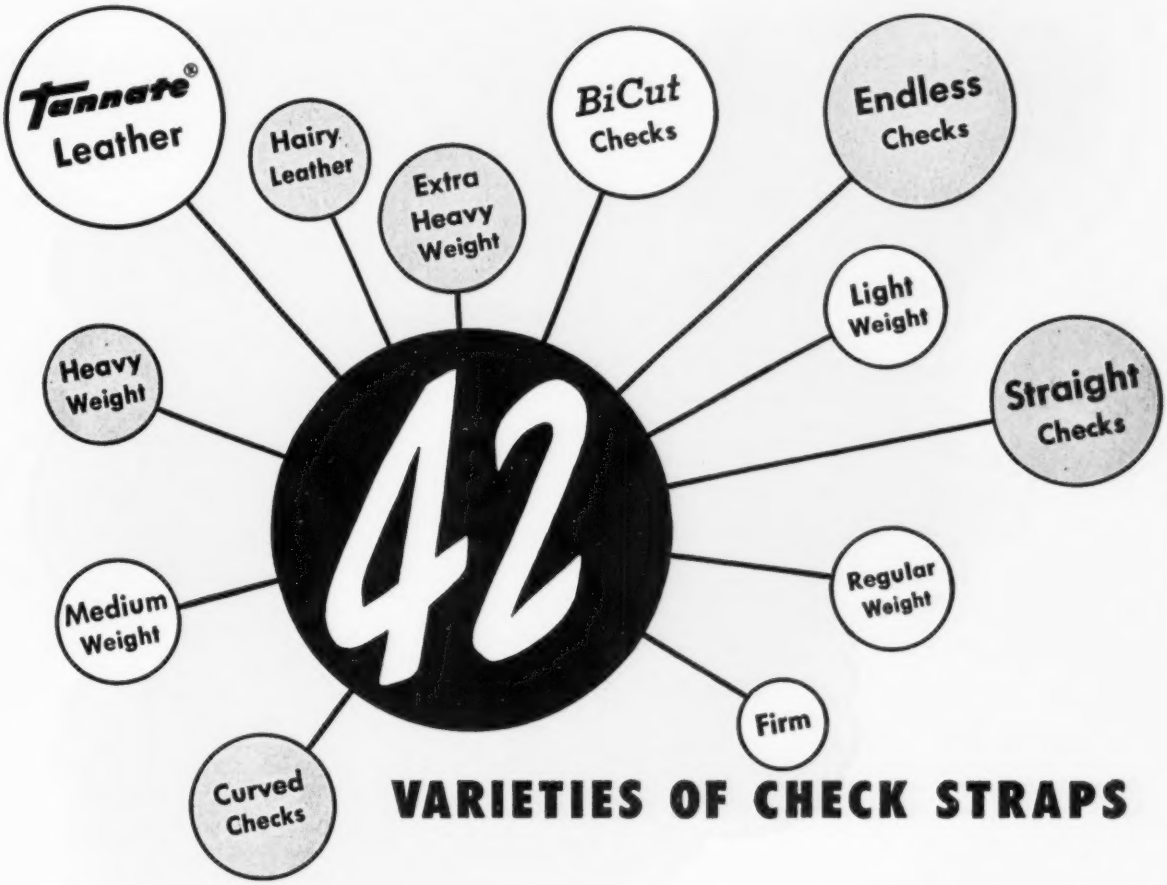
Fabrics for outerwear will be manufactured by the newly organized **Terri-Cord Mills, Inc.,** 1901 West Lafayette Blvd., Detroit, Mich. Marvin Frenkel is head.

"Cheer Up! Only Six Months 'til Christmas! and then another vacation" was the way the "Textiles Review" of **Textiles-Incorporated,** Gastonia, N. C., greeted its readers after the return of the employees from their annual vacation. Some of them felt that was small consolation for leaving their "Life of Riley" existence, however. * * * The firm has established five $3,000 scholarships for children and dependents of employees of the company. Each scholarship is for a maximum of $750 a year over a four-year period. A loan fund for students coming from families of the company has also been set up.

A one-story addition is being constructed at **Trenton Cotton Mills,** Gastonia, N. C., for laboratory and warehouse service.

Triangle Hosiery Co., High Point,

NOW, YOU CAN SELECT THE EXACT CHECK STRAP FOR BEST RESULTS



VARIETIES OF CHECK STRAPS

There's a Rhoads Check Strap to Meet Your Requirements! . . . Available in four styles (Rhoads patented BiCut, straight, curved and endless), two tannages (Rhoads exclusive Tannate Special Leather and the new Rhoads hairy leather), four weights (extra heavy, heavy, regular and light weight), and three degrees of firmness (firm, standard and mellow) all custom-cut to your specifications. Exclusive tanning and finishing processes build into Rhoads' check strap leathers the qualities you need for smooth, efficient loom operation.

Why Rhoads Makes 42 Varieties of Check Straps . . . Because we want to be able to offer you exactly the right check strap to meet the temperature and humidity conditions in your mill, the width of your looms, the cloth being woven, even the personal preferences of loom fixers. All these factors influence check strap efficiency which in turn, is important to the quality and continuity of production.

Direct Factory Representatives Insure Satisfaction . . . Our own force of experienced field representatives will be glad to assist you in the selection of the check straps best suited to your requirements. In this way, we can insure still further, your complete satisfaction with our straps. So get the complete story on Rhoads Check Straps now, before you place your next order.

Send for This Folder . . . Free of Charge . . . You'll want this folder because it outlines the complete specifications for each of the 42 check straps we now offer. It's something you'll want to keep, too, because it can be used as a handy desk or wall chart for quick reference.

For your *free* copy, call or write:

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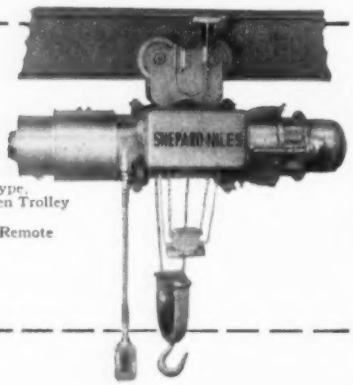
● One man replaces many—and moves more goods faster—with a Shepard Niles Electric Hoist! These rugged hoists free floor space for production, put waste ceiling area to work. They enable an older man, woman or youth to handle heaviest loads with ease.

Learn how a Shepard Niles Hoist—in light, medium or heavy capacity—fits into your production picture. Call in the Shepard Niles representative—he'll help you select the right capacity and controls for your handling job.

2 FAMOUS HOISTS

Heavy Duty SHEPARD NILES Hoist

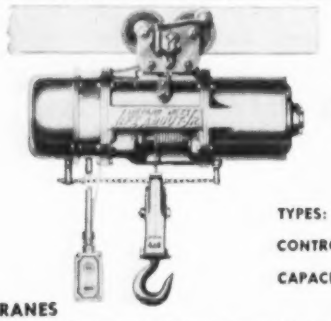


TYPES: Lug Suspension, Hook Suspension, Base Type, Push Trolley, Geared Trolley, Motor-driven Trolley

CONTROLS: Pendant Rope, Push Button, Outrig, Remote

CAPACITIES: 500 to 40,000 lbs.

SPEEDS: To meet your requirements—Write for latest bulletins.



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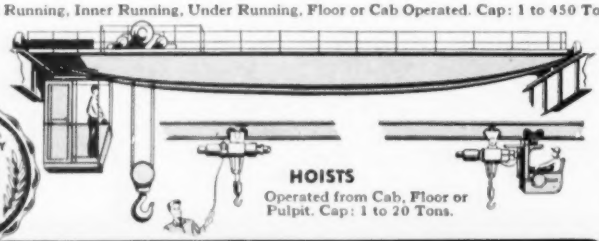
TYPES: Lug Suspension; Hook Suspension; Push Trolley

CONTROLS: Single Speed; Push Button; Rope Operated

CAPACITIES: 500, 1,000 or 2,000 lbs. Write for latest bulletins.

CRANES

Overhead: Top Running, Inner Running, Under Running, Floor or Cab Operated. Cap: 1 to 450 Tons.



50th ANNIVERSARY SHEPARD NILES CRANE & HOIST CORP. 1903-1953

HOISTS

Operated from Cab, Floor or Pulpit. Cap: 1 to 20 Tons.

SHEPARD NILES CRANE AND HOIST CORPORATION

1926 SCHUYLER AVENUE, MONTOUR FALLS, N.Y.

What the TEXTILE MILLS are doing

N. C., has leased the former building of Guilford Hosiery Mills, Inc., for expansion purposes.

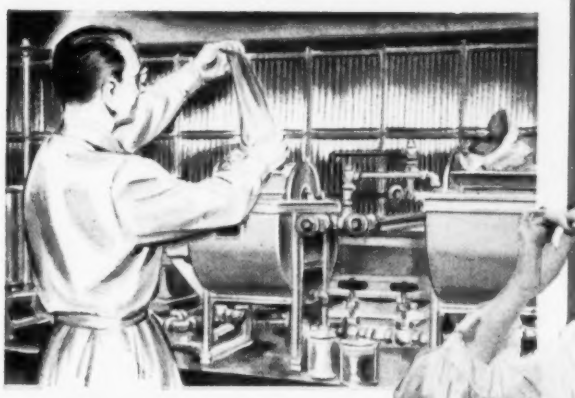
The Langley-Bath-Clearwater Recreation Park, available to employees of **United Merchants and Manufacturers, Inc.**, proved a source of great enjoyment all the past summer. Opened on May 18, it provided picnic grounds, swimming facilities, organized sports, and other means of recreation. * * * The Augusta, Ga., weaving unit of the firm is currently making fiber glass cloth which is being used to make the vests worn by Marines in Korea. As the company paper "The Beam," pointed out, here is one instance where people's lives are actually dependent upon the good quality of the material produced by the mill. * * * A new emergency lighting system has been installed at the Seminole plant, which is so arranged that in case of any power stoppage at the mill the generator will start up and furnish adequate light to eliminate hazards in trying to get out of the dark, air-conditioned building.

Seventeen employees of the **U. S. Rubber Co.'s** mill at Hogansville, Ga., earned textile credits by attending textile classes at the plant, sponsored by the Georgia State Department of Education and Georgia Institute of Technology. * * * A blend of 60% Orlon and 40% spun viscose, known as "Royal-O," is being manufactured at the firm's Winnsboro Mills in Winnsboro, S. C. Officials report that the blend results in material that is comfortable, light in weight, and completely washable.

Employees of **West Point Manufacturing Co.** and **Lanett Bleachery & Dye Works** recently purchased 750 company-owned houses. The number will be increased to about 2000 with the sale of homes owned by West Point in Shawmut, Langdale, Fairfax, and River View, Ala.

Wamsutta Mills, New Bedford, Mass., have purchased Somerset Mills, Inc., Roxboro, N. C. The new owners will continue operations as heretofore.

Windsor Knit Co., Inc., recently chartered, will manufacture outerwear. Norman Burger, 175 Fifth Ave., New York, is attorney and representative.



A Textile Cosmetic

DURA BEAU is a finish that reveals hidden beauty in every fibre of almost every fabric—a time-tested formula that makes textiles spring to life with new-found enrichment and buy-appeal! It's the answer to the eternal clamor for glamour!

The DURA BEAU GIRL of 1953

Dura Beau TEXTILE FINISHES

Reg. U.S.A. and CANADA

In the field of hosiery, for instance, DURA BEAU Finishes have been used—for decades—on more stockings than all other finishes combined! Write, wire or phone for one of our practical fieldmen.

SCHOLLER BROS., INC. • Manufacturers of Soaps, Softeners, Sulfonated Oils and Finishes • Collins & Westmoreland Sts., Phila. 34, Pa.

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Where Smoothness Pays Off ...for You

Smoothness is the big reason why many textile mills use Synthane laminated plastics for the balloon separator blades on their twisting machines.

The hard, smooth surface of Synthane reduces abrading of the yarn. Should the blades, by chance, become scratched they're easy to repolish.

Smoothness is only one of the properties that make Synthane valuable throughout the textile industry.

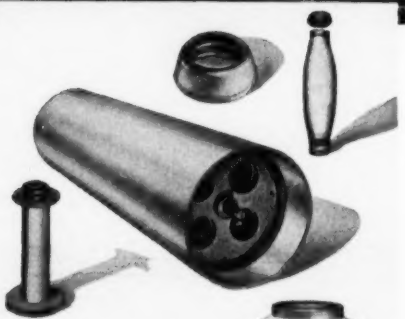
Bobbins machined from Synthane resist the action of yarn sizing solutions. Synthane's light weight makes starting and stopping of bobbins and pirns faster, uses less power. Dynamic balancing of bobbins reduces vibration, steps up allowable spindle speeds. Synthane's high compressive strength combats the crushing force of nylon yarn.

Furnisher rolls made from Synthane do not absorb moisture or dyes. Because Synthane weighs little, is dimensionally stable, strong and tough, and can be easily machined to a smooth, non-snagging finish, it is an ideal material for pressure rolls and measuring rolls.

Synthane products for the textile industry also include drier poles, dye sticks, caps for nylon sizing bobbins, high-strength headless package take-up tubes, caps for orlon and nylon shipping pirns, a new collapsible bobbin and many others.

Learn more about how Synthane can help you. Write today for your copy of the Synthane Textile Product Folder Synthane Corporation, 10 River Road, Oaks, Pennsylvania

Synthane—one of industry's unseen essentials



Furnisher rolls, pressure rolls, measuring rolls, nylon sizing bobbins and caps, headless package tubes, pirns, redraw caps, and hosiery turning and examining forms are a few of a long list of textile parts made from Synthane.

SYNTHANE

OAKS, PENNA.

LAMINATED PLASTICS

Superior light fastness and simplified dyeing procedure with DU PONT "CAPRACYL"* DYES FOR WOOL

The "CAPRACYL" dyes are metallized dyes that produce excellent fastness results on piece, top, and stock. These new dyes, in a full range of colors, give the good light fastness needed for woolen men's wear, auto upholstery, carpets, and other type fabrics where exposure is a major factor. In addition to light fastness, the "CAPRACYL" dyes offer good wet and spotting fastness.

These new dyes are easy and economical to use. They are applied under essentially neutral conditions in a short dyeing cycle. The saving in time and chemicals has the valuable side effect of less damage to the wool fiber.

The "CAPRACYL" colors have high covering power, even on tippy wool, under proper application methods. They produce consistently level dyeings. By supplementing the "CAPRACYL" range with selected anthraquinone blues and greens, it is possible to produce practically all the light to medium men's wear and upholstery shades, all of which have excellent monotone fading characteristics.

For further information, or for technical-service helps on any dyeing problem, write E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.

Du Pont Dyes

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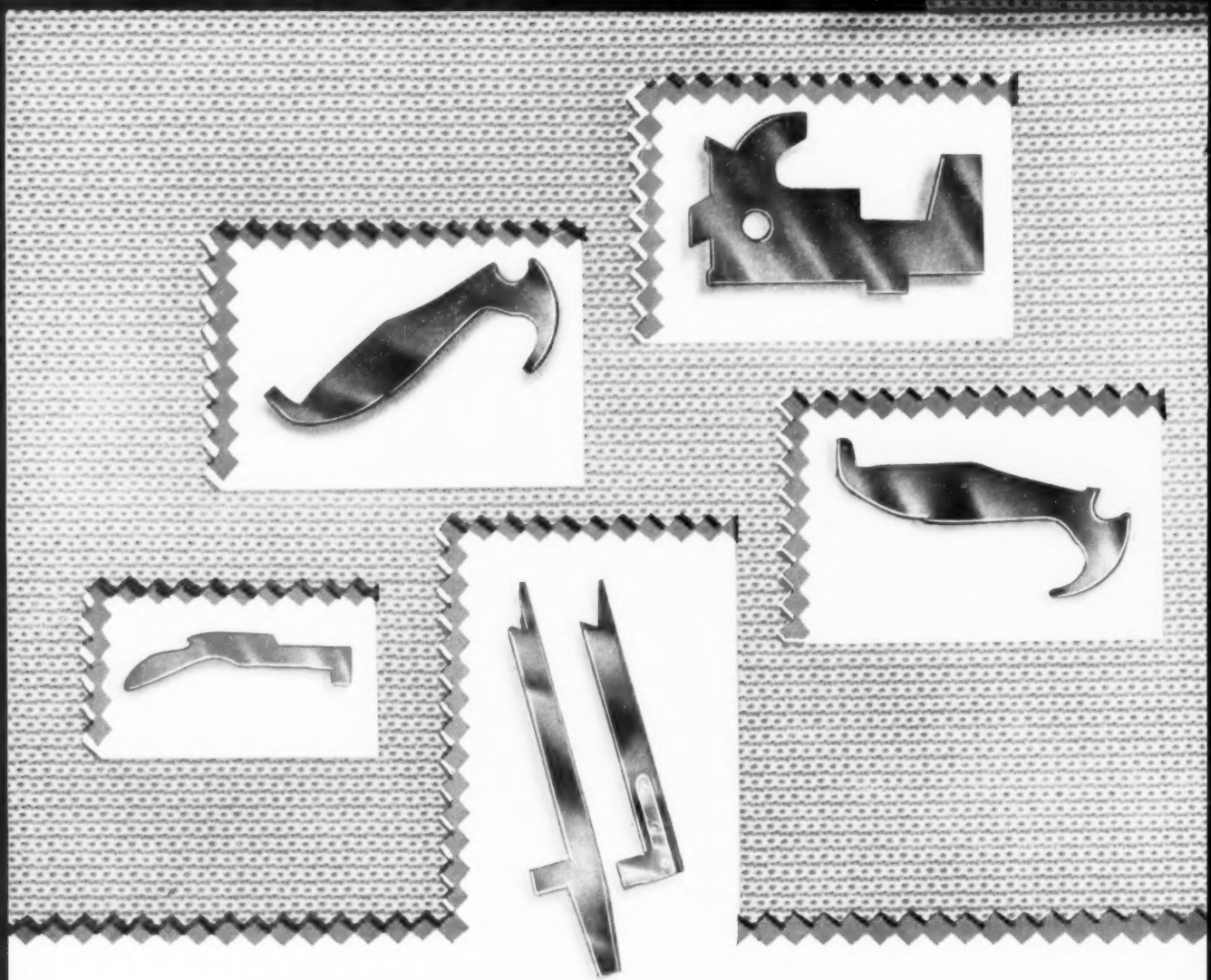
BETTER THINGS FOR BETTER LIVING
... *THROUGH CHEMISTRY*



TORRINGTON'S COMPLETE NEEDLE SERVICE...

includes essential parts to meet all needs

Whatever your requirements in needles and parts Torrington can meet them.

Choose with confidence from Torrington's precision-made sinkers, dividers, split dividers, knockover-bits, stitch combs and other standard parts . . . or let us discuss with you the development of new designs to meet special needs. Your inquiry will receive prompt attention. Call our nearest office today.

THE TORRINGTON COMPANY
Torrington, Conn., U.S.A.
Established 1866

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The New Cocker High Speed Tricot Warper

As shown at the Knitting Arts Exhibition, Atlantic City.

Insert shows side view of Cocker Adjustable Post Tension with Balloon Breaker.

Valuable New Features

Air Doffing

Air Operated Presser Roll

insuring constant pressure of presser roll against beam for entire length of warp.

Front Carrier Roll Lowered

cutting distance of yarn travel from cross-over roll to beam.

Also Shown

Storage Rolls and Cone Creel, with creel equipped with the new Cocker Adjustable Tension, Eyeboard Stop Motion, and DMRT Electronic Relay.

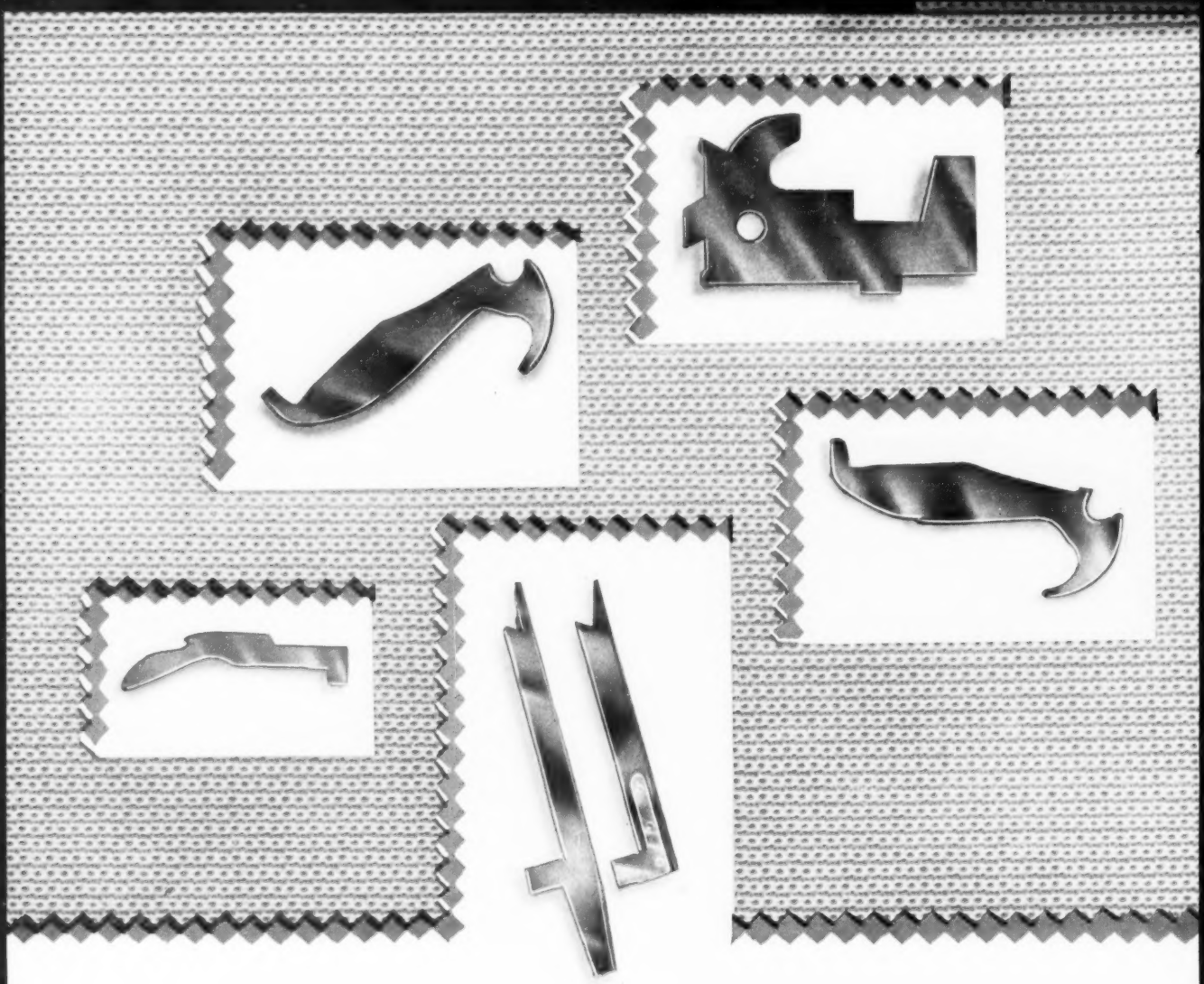
For the very best in warping all types of yarn, we offer the above equipment for handling either 21" or 42" beams with 21" diameter flanges.

Write or wire for full particulars.

THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT



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includes essential parts to meet all needs

Whatever your requirements in needles and parts Torrington can meet them.

Choose with confidence from Torrington's precision-made sinkers, dividers, split dividers, knockover-bits, stitch combs and other standard parts . . . or let us discuss with you the development of new designs to meet special needs. Your inquiry will receive prompt attention. Call our nearest office today.

THE TORRINGTON COMPANY
Torrington, Conn., U.S.A.
Established 1866

SPRING BEARD · LATCH · LEADED AND PARTS

TORRINGTON NEEDLES

Branches: New York · Philadelphia · Chicago · Boston · Greensboro, N.C. • St. Louis • Bedford, P.Q.–Toronto, Canada • *Pacific Coast Representative:* E. G. Paules, 1762 W. Vernon Ave., Los Angeles 37, Calif. • Broadgate House, 7-10 Eldon St., London E.C.2, England

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Also Shown

Storage Rolls and Cone Creel, with creel equipped with the new Cocker Adjustable Tension, Eyeboard Stop Motion, and DMRT Electronic Relay.

For the very best in warping all types of yarn, we offer the above equipment for handling either 21″ or 42″ beams with 21″ diameter flanges.

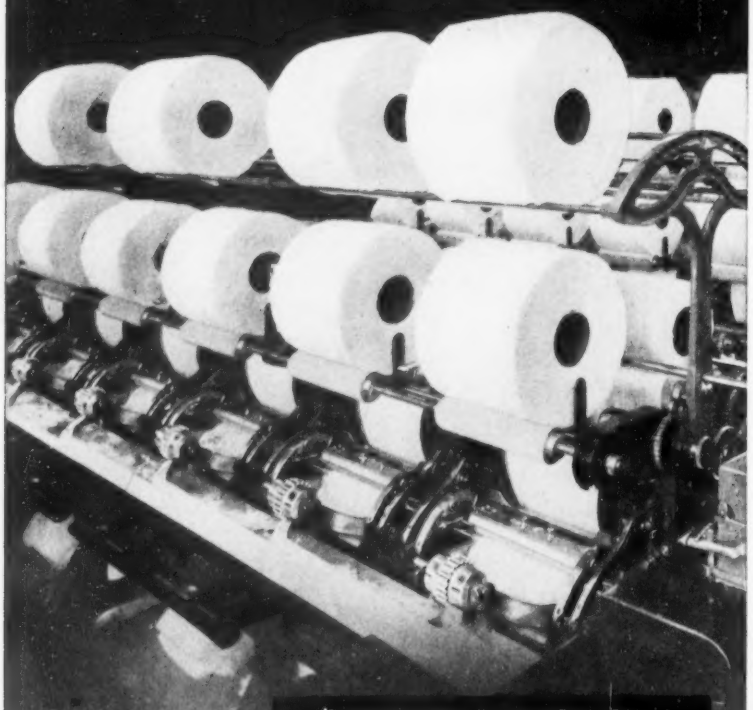
Write or wire for full particulars.

THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

NO LOST PRODUCTION *with* BIJUR*

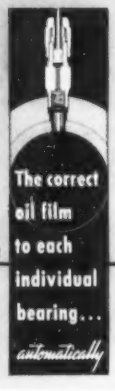


* STANDARD EQUIPMENT ON SACO-LOWELL COMBERS

With controlled lubrication, SACO-LOWELL COMBERS operate at high efficiency — 168 bearings lubricated automatically — with the right quantity of oil, at the right time—"while the machine is running"—with no spotting of the fine product by excess oil.

Specify Bijur Automatic Metered Lubrication — guard hard-to-reach, forgotten bearings on all types of machines — provide longer machine life — lower maintenance — plus INCREASED PRODUCTION.

Consult a Bijur engineer — the expert on all machine lubricating problems.



N-2

BIJUR

LUBRICATING CORPORATION
Rochelle Park, New Jersey
Pioneers in Automatic Lubrication

246

SUPPLIERS *News*

WHAT THEY ARE DOING

Edward C. Evans, C. Robert Lammers, and John H. Prout have been appointed sales managers by **Acme Steel Co.** They will have charge of the unit-load band, steelstrap, and stitching machines, respectively.

George H. Hotte has been made manager of textile fiber sales for

Mr. Hotte

Allied Chemical & Dye Corp., National Aniline division. He was previously with A. M. Tenney Associates, Inc.

The **American Chemical & Solvents Co.,** Providence, R. I., was recently appointed New England sales representative for **Refined Products Corp.**

Karl H. Inderfurth of Charlotte, N. C., has been appointed southern representative for **Arlington Machine Works.**

After completing 50 years in the textile field, Weston W. Sitley, sales representative for **Associated Spinners, Inc.,** was honored recently by members of the firm.

Joseph Bancroft & Sons Co. recently was presented two top advertising awards—one for business paper advertising in merchandising publications, the other for the "Everglaze" monthly bulletin—in the 1953 creative competition of the National Advertising Agency Network.

Factory branch offices were recently opened in Syracuse, N. Y., and Jacksonville, Fla., by the automatic control and uni-flo divisions of the **Barber-Colman Co.**

H. Elliott Batson, after two years of service with the Armed Forces, has returned to the organizations of

L. F. Dommerich & Co., Inc.

Executive and General Offices

271 MADISON AVENUE

NEW YORK 16, N. Y.

Telephone: Murray Hill 3-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

BUSINESS ESTABLISHED 1840

Need tubes in a hurry?

We deliver them practically overnight to any mill in the South. Let's get together and work out a delivery schedule that fits in with your production schedule. Telephone, write or wire!

Manufacturers of better

Convolute and Spiral Wound Cloth Tubes

Carpet and Rug Cores

Yarn Tubes

Cloth Winding and Baling Boards

Beaming and Carlining Paper

TEXTILE PAPER PRODUCTS, INC.

Cedartown, Georgia — Telephone 1500

Prompt delivery by our own trucks throughout the South

SUPPLIERS News

WHAT THEY ARE DOING

Louis P. Batson Co. and **Batson Manufacturing Co.**, of Greenville, S. C. His territory will include parts of North and South Carolina, Georgia, and Virginia.

Buffalo Electro-Chemical Co., Inc., division of Food Machinery and Chemical Corp., has announced that the firm's sodium perborate is now available in quantity.

Arthur L. Snyder has succeeded Carl A. Setterstrom as sales manager of the textile fibers department of **Carbide and Carbon Chemicals Co.** Mr. Setterstrom is now general manager of the department.

New head of the fiber spinning research section at the Summit, N. J., research laboratories of **Celanese Corp. of America** is J. Stewart Campbell.

Alfred L. Peiker was recently named director of the development division of **American Cyanamid Co.'s** Stamford research laboratories. In the Calco Chemical division the following appointments have been made:

Mr. Mackenzie

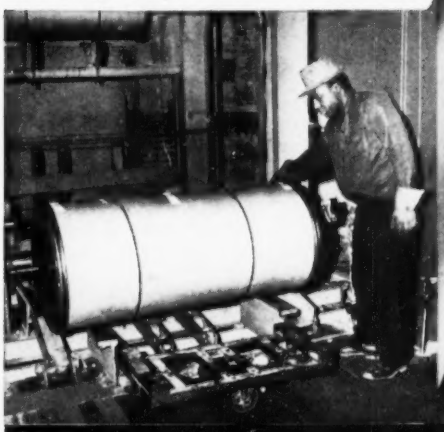
Mr. Wood

Cameron Mackenzie, branch manager, dyestuff department of the Boston district office; Robert P. Wood, branch manager, Providence office; James Naylor, manager, dyestuff department, Bound Brook; and Milton H. Mettee, III, branch manager metropolitan sales district.

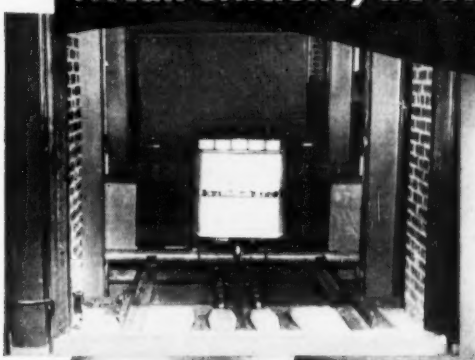
William S. Crawley succeeds the late John S. Chaya as head of the yarn processing and weaving division of **American Viscose Corp.'s** textile research department. He was previously assistant to Mr. Chaya.

Cooper Alloy Foundry Co. has acquired an interest in **Vanton Pump Corp.**, Empire State Building, New York, N. Y. This firm produces the

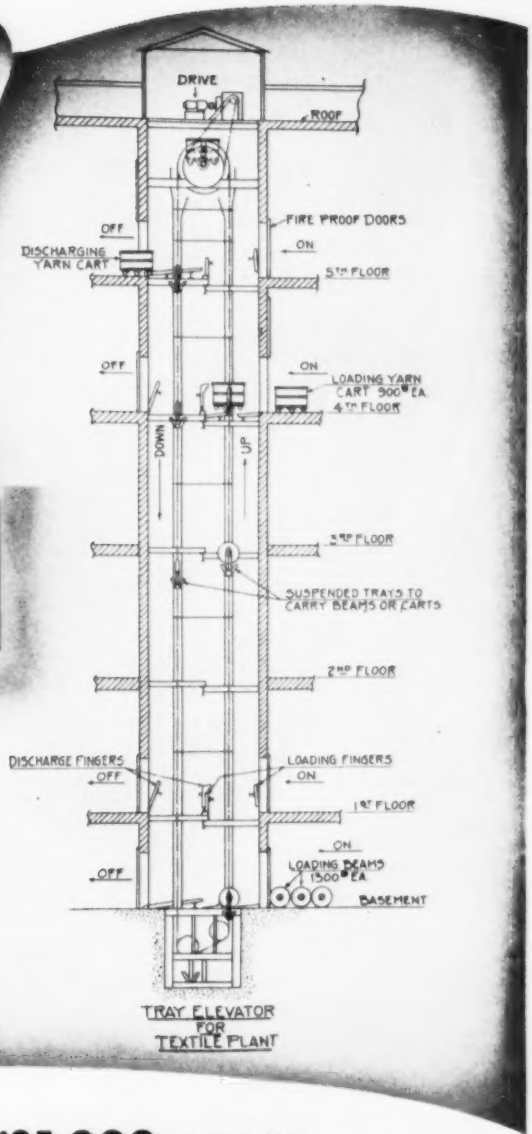
Beam being discharged at predetermined floor



Only through Engineering...
...can efficiency be achieved



Loaded box truck on way to desired floor



Firestone saves $25,000 a year with this G-W "Ferris Wheel"

Moving 1300-lb. beams of rayon and 900-lb. box trucks in and out of freight elevators is a back-breaking job. Yet approximately 230 of these bulky loads must be lifted (and empties returned) every day at the Firestone Textiles Division of the Firestone Tire and Rubber Co., Gastonia, N. C.

This Gifford-Wood "Ferris Wheel"—a 6-story roundabout tray elevator—has assumed most of the work load. Beams and trucks are automatically picked up on the loading side of a shaftway by trays suspended between two endless chains, carried to the top, eased over the drive sprockets, lowered to the desired floor, and automatically discharged.

The $25,000 annual saving is basically one of reduced labor requirements and improved handling efficiency, and the limited manual work remaining is much less strenuous than formerly.

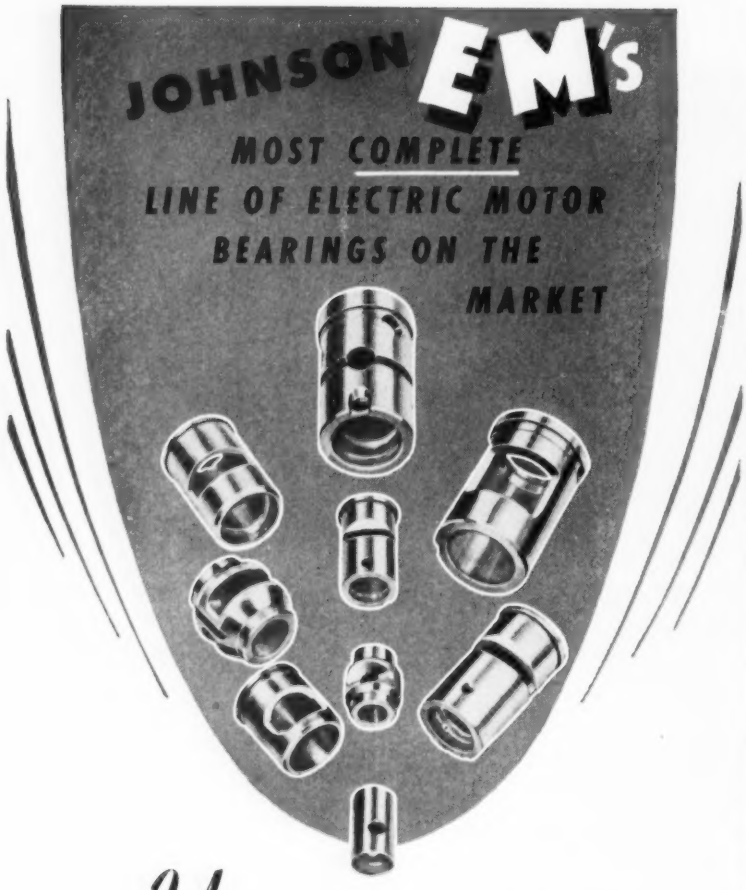
This is just one of many conveyors born of G-W ingenuity and experience—a product of efficiency through engineering. Call on G-W Materials-Handling Engineers to survey your present methods; you are under no obligation. It might well prove to be a step toward higher profits through lower operating and maintenance costs.

When You Think of Materials Handling—Think of **GIFFORD-WOOD CO.**

Since 1814 • Hudson, New York

NEW YORK 17, N. Y. 420 LEXINGTON AVE. | ST. LOUIS 1, MO. RAILWAY EXCHANGE BLDG. | CHICAGO 6, ILL. 565 W. WASHINGTON ST.

8405



YOU can be sure of dependable motor performance when you install Johnson EM Bearings . . . and you can use them on every job, as there are bearings for all makes. Johnson Electric Motor Bearings are cast in SAE 67 alloy . . . 15% lead . . . which provides easy conformability and prevents galling or freezing to the shaft. The ratio of copper to tin assures resistance to pounding and wear. They will meet the toughest operating conditions. The Johnson Bearing Catalog will help you select the correct bearing for each job.

JOHNSON BRONZE COMPANY
430 South Mill St., New Castle, Pa.

JOHNSON B BEARINGS
Sleeve-Type

Write for your free copy today

SUPPLIERS News
WHAT THEY ARE DOING

patented corrosion-resistant "flex-i-liner" plastic pump and a line of polyethylene valves and fittings.

Truman L. Clapp has retired as president of **Clapp & Poliak, Inc.** He had been head of the firm since 1937.

William H. Ward, formerly with North American Rayon Corp., has

Mr. Ward

joined **Courtaulds, Inc.,** as sales representative for the southern territory. His headquarters are in Greensboro, N. C.

Ralph V. Carlson, Jr., has been made southern New England sales representative for **Crown Chemical Co.,** calling on customers in Rhode Island, Connecticut, and parts of Massachusetts.

After 25 years with the company, Fred W. Fraley has retired as vice-president of **Diamond Alkali Co.**

Draper Corp. has closed its bobbin roughing mills at Bennington, Vt., and Guilford, Me., and has put them up for sale.

The Old Hickory rayon plant of **E. I. du Pont de Nemours & Co., Inc.,** has totaled 28,160,000 man-hours without a lost-time injury, setting a matchless record in industrial safety. This achievement was marked by a ceremony for all employees.

K. K. Boyd was recently elected vice-president in charge of sales and purchases for **Emery Industries, Inc.** He has been with Emery for the past eighteen years.

Howard I. Green, who resigned from Fidelity Machine Co. following the sale of the Green interests, is now president of **Fidelity-America Financial Corp.,** private bankers. The

(Continued on page 237)

47

Years

★

AS
CONTRACTING ELECTRICAL ENGINEERS
TO THE TEXTILE INDUSTRY

★

J. M. CLAYTON COMPANY
Contracting Electrical Engineers
ATLANTA, GEORGIA

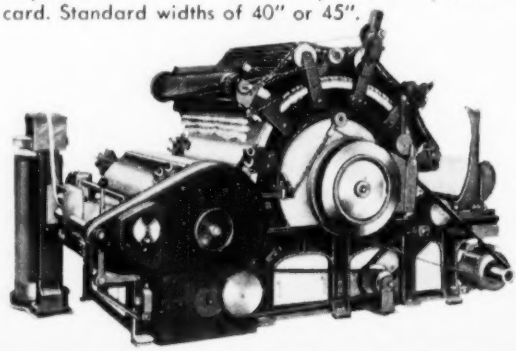
basic

You're in business to make money and *the efficiency of your machinery has a lot to do with profits.* Platt machines are developed in co-operation with the world famous T.M.M. Ltd. spinning research laboratory, built to rigid specifications and **proven in mills throughout the world.** This is the type of machinery that is basic to the successful operation of a cotton mill: highly productive, economical and of long life. Atkinson, Haserick would be glad to show you the proof.

basic TO CARDING

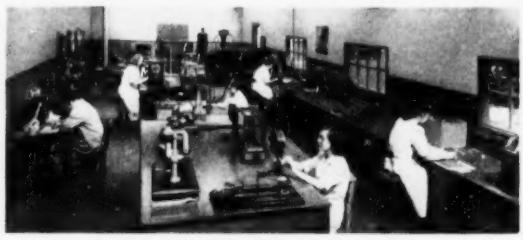
EVEN, NEPLESS WEBS . . . . . .

With Platt's Revolving Flat Card, accurate settings are easy to obtain and hold, insuring the production of an even, nepless web for both light and heavy carding. There is an exceptionally strong cross rail construction and rigid foundation. Vibration is virtually eliminated and air currents minimized. Cut staple fibers can be worked very successfully on this card. Standard widths of 40" or 45".



PLATT BROS.
(SALES) LTD.
OLDHAM, ENGLAND

Staff of 150 work on fiber control problems for all sections of the spinning industry.

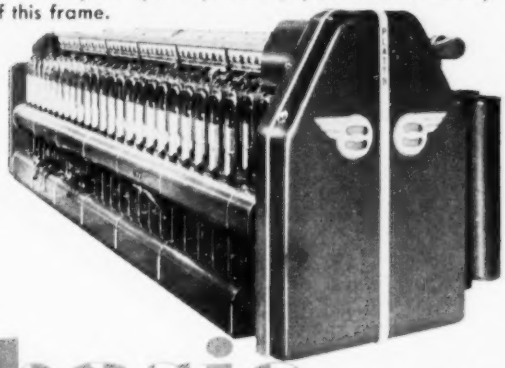


Laboratory provides continual information on all processes from bale to plied yarn.

basic TO ROVING

FIBER AND TWIST CONTROL...

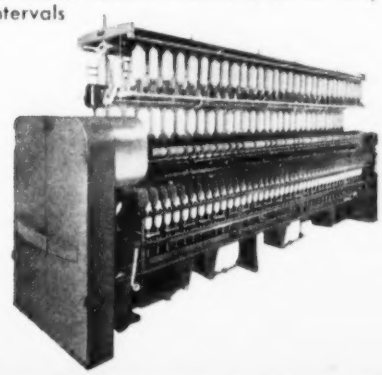
The new Platt M.S.2 High Draft Roving Frame operates with great efficiency at high speeds. Three drafting zones give unprecedented fiber control through a wide range. A stronger roving is formed by inserting more of the total twist close to the nip of the front roll. The firm roving sheds little fly. You will be impressed by the quiet operation, speed and efficiency of this frame.

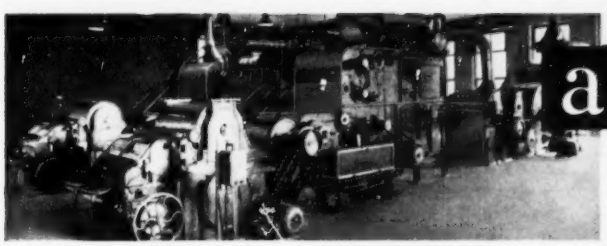


basic TO SPINNING

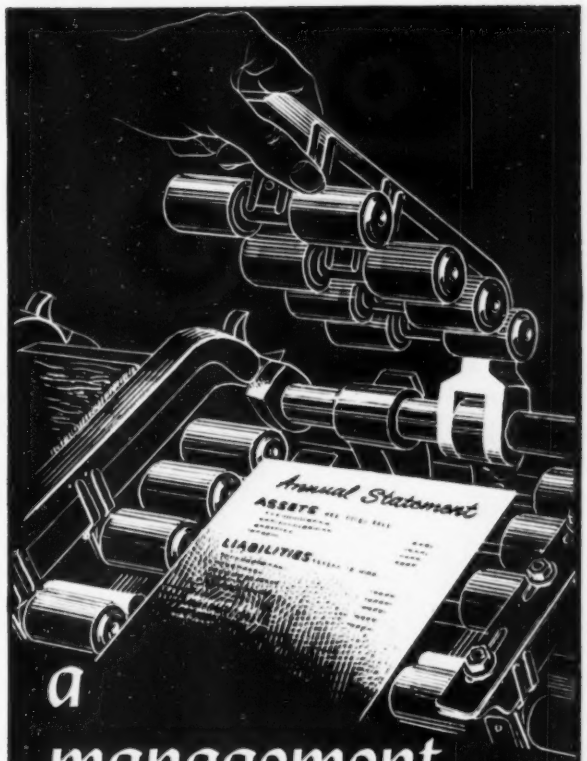
LARGE PACKAGES, HIGH SPEED...

The Platt M1 Ring Spinning Frame is a practical, proven frame for large packages. It has a choice of high drafting arrangements and a new spring arm roller weighting that adjusts to a wide range of staple lengths without altering the nip pressure. The simplified headstock has central lubrication, few gears and flexibility of turns per inch. Roller bearing spindle needs routine maintenance at only 2,500 hour intervals





Actual conditions in opening, picking, carding and spinning rooms are reproduced in the laboratory.



a management responsibility

Don't you owe it to your mill to investigate ALL the new processes, new fibers, new machinery. A visit to our Charlotte display rooms would be time well spent. We are engineers and agents for some of the finest machinery developed in England.

Atkinson, Haserick & Co.

Textile Machinery Agents and Engineers Since 1823

211 CONGRESS STREET
BOSTON 6, MASS.
1639 W. MOREHEAD STREET
CHARLOTTE 2, N. C.

a.h.

FOSTER MODEL 78

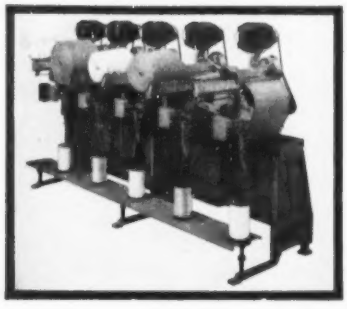
Heavy Duty Precise Wind Machine

This 51-lb. Cone of Rayon Tire Cord Is a Typical Product of Model 78

FOSTER MODEL 78 was designed for heavy duty work, such as winding rayon tire cord, sisal twine, sash cord, and heavy cotton and wool yarns. But its controls are so sensitive that it has also wound successfully 10 single cotton yarn to 31 lb. cones. Thus it offers wide adaptability as well as maximum package size and high production.

This machine has individually motor driven spindles, with push-button electronic slow start and spindle brake. Electric stop motion, with calibrated scale, assures accurate and uniform package size. It may be equipped to wind traverses from 6" to 10" and diameters up to 16", and will draw overend from bobbins or from swifts, reels or an unrolling device. It has no clutches or idler pulleys, and long drive belts are eliminated. It may be equipped with positive, gear driven gainer attachments or belt gainer which is easily adjusted for various yarn sizes. Easily positioned single weight adjusts pressure and pressure release mechanism. Spindles are mounted on ball bearings. In short, this machine utilizes every proven technological improvement.

For the complete story, write for Bulletin A-98A



FOSTER MACHINE COMPANY

WESTFIELD, MASS., U. S. A.

Southern Office: Johnston Bldg., Charlotte, N. C.

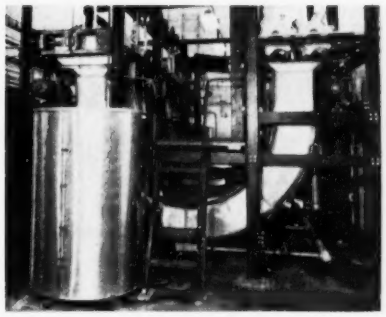
Canadian Representative

Ross Whitehead and Co. Ltd., 1475 Mountain St., Montreal, Que.

European Representative

Muschamp Taylor Ltd., Ashton-Under-Lyne, Eng.

HERE'S THE COMBINATION
for Profitable Bleaching



The "Junior" unit—typical of the efficient systems which have modernized bleaching.

DU PONT CONTINUOUS SYSTEMS

Speedy, economical, continuous peroxide bleaching systems for production of high quality work in large and small mills. Capacities range from 500 to 7,500 lbs./hr. Each system is easily adapted to suit requirements.

ALBONE® HYDROGEN PEROXIDE

A stable, uniform product of high purity. Available quickly from stocks in principal cities. Shipped in drums or tank trucks and tank cars for plant storage systems.

The complete bleaching service includes operating manuals, bleaching surveys and specific confidential reports for individual operations or mills.

DU PONT TECHNICAL SERVICE

Bleaching specialists located in important textile centers can give prompt advice and expert assistance—recommendations which can help you operate your bleaching process efficiently and economically.

SEND FOR FREE ILLUSTRATED BOOK about Continuous Bleaching. It describes typical installations in leading mills and all phases of the process. Just fill out and mail the coupon below for your copy.

DU PONT CONTINUOUS PEROXIDE BLEACHING

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . *THROUGH CHEMISTRY*

TI-93

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Del.

Please send me more information about Du Pont Continuous Peroxide Bleaching Systems—including your free book.

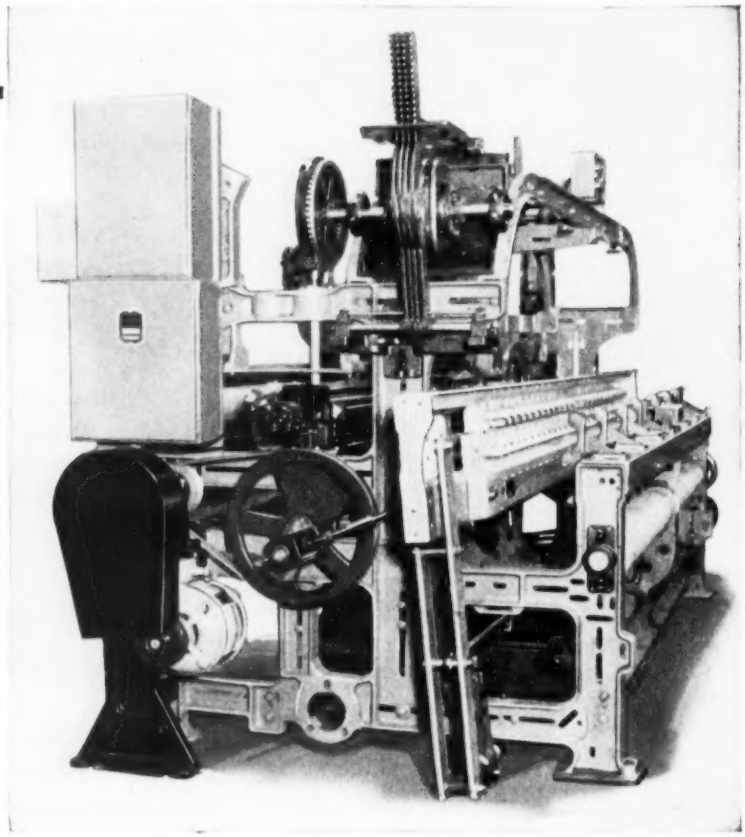
*Name*_____ *Position*_____

*Firm*_____

*Address*_____

*City*_____ *State*_____

MAINTENANCE OR CAPITAL INVESTMENT?



Orders for new equipment indicate that mill management is resolved to keep its lines competitive and its business profitable. Depreciation reserves are a favorite source of funds for this purpose.

For those whose reserves may not be available, the *profit possibilities* of new Fletcher Looms will facilitate the *financial problem.*

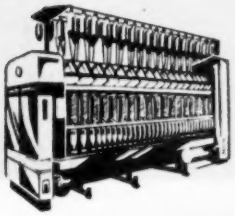
Fletcher High Speed Semi-Automatic Looms are meeting the requirements in various lines of narrow fabric weaving.

May we talk it over?

FLETCHER WORKS

225 GLENWOOD AVE. PHILADELPHIA 40, PA. ESTABLISHED · 1850

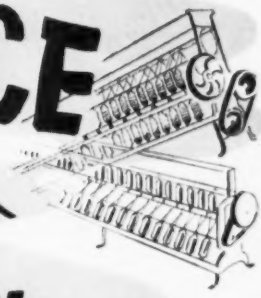
Southern Representative . . . F. W. WARRINGTON, Johnston Bldg., Charlotte, N. C.



SACO-LOWELLIZE

AND NEUTRALIZE

OBSOLESCENCE



THE LEAK THRU WHICH PROFITS FLOW

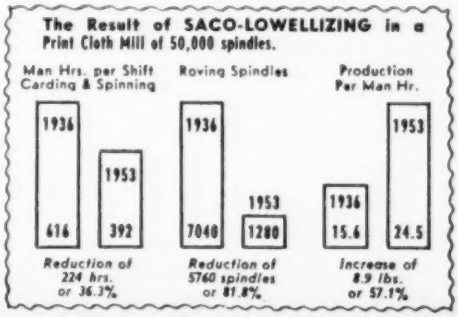
SACO-LOWELLize (verb)

(A) To utilize floor space so as to improve the flow of production.
(B) To co-ordinate the successive steps in processing.
(C) To reduce waste, spoilage, and unnecessary handling of stock.
(D) To realize the greatest economies in operating and maintenance costs.

. . . **HOW IT HELPS** — In these highly competitive days, the overall production efficiency, operating economy, minimum waste and maximum use of man hours is essential for profitable operations. Saco-Lowellizing eliminates the losses due to obsolescence and waste; increases efficiency, lowers costs — helps you make a profit.

. . . **HOW IT'S DONE** — Call the nearest Saco-Lowell office and arrange for a Saco-Lowell engineer to prepare a "Forecast of the Savings" which you will realize when you SACO-LOWELLIZE.

The "Forecast of Savings," based on the recommendations of the SACO-LOWELLIZING program, will be of interest to those managements considering a program for bettering their operations and increasing their profits.



SACO-LOWELL

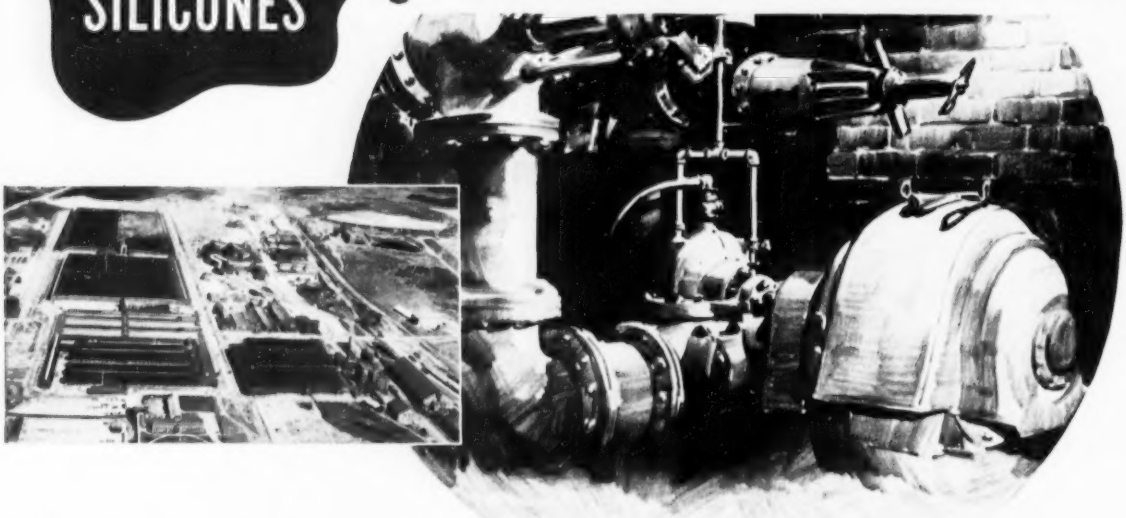
60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

DOW CORNING
SILICONES

give motors more muscles



Seventeen 100 to 250 hp motors uprated by 50%; save over $50,000

Largest aluminum producing plant in the world, the Arvida Works of the Aluminum Company of Canada, Ltd., (Alcan) increased its capacity several times in the past few years to a current high of 2 million pounds of ingot per day. Over a year ago an obstacle to further expansion turned up in the ore plant, where bauxite is mixed with a caustic solution to separate the alumina. Called on to handle larger quantities of caustic solution, the plant was unable to replace their existing pump motors with larger motors. There was simply no room for them.

Alcan maintenance engineers neatly solved that problem by rewinding all 17 of their 100, 125 and 250 hp motors with Class H insulation made with Dow Corning silicones. Total power output was increased by more than 50%. The cost of rewinding with Class H materials was $50,000 less than the list price of the equivalent capacity in new motors. And that doesn't include the far greater expense of installing larger pedestals, changing all the fittings, and rearranging the pump lines to accommodate larger motors. Furthermore, downtime was held to a minimum during the changeover.

Rewound with Class H insulation these motors have carried a 50% overload for over a year in spite of frequent spraying with caustic solution. And that's typical of the performance of Class H motors, regardless of size. They can carry heavy sustained overloads; operate with greater power efficiency where periodic overloads are involved; give 10 or more times the life of Class B motors under comparable service conditions. That's why alert management, maintenance and production men now specify Class H insulation for hard-working motors, generators and transformers.

mail this coupon today

Dow Corning Corporation
Dept. BL-9, Midland, Michigan
Please send me:

- ☐ Performance Data on Class H machines.
- ☐ List of Class H motor repair shops.
- ☐ Data on Silicone Grease for motor bearings.
- ☐ 24 page booklet entitled "Tall Tales and Fabulous Facts."

Name_____

Company_____

Street_____

City_____ Zone_____ State_____

You can also reduce or eliminate motor outages due to bearing failure; specify Dow Corning 44 Silicone Grease for motor bearings.

In open and single shielded bearings designed for high temperature operation, Dow Corning 44 has 8 to 10 times the life expectancy of conventional greases. It gives life-time lubrication in permanently sealed bearings.

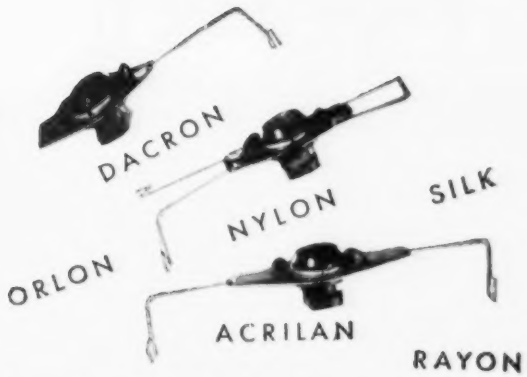
DOW CORNING CORPORATION
Midland Michigan

DOW CORNING SILICONES

ATLANTA • CHICAGO • CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEW YORK • WASHINGTON, D. C. (Silver Spring, Md.)

In Canada: Fiberglas Canada Ltd., Toronto • In Great Britain: Midland Silicones Ltd., London

Do You SPIN or TWIST



Here's Real Help

- **HERR FLYERS – producing light tensions at high speeds**
- **HERR CONICAL RINGS – to obtain cleaner, heavier doffs, smoother yarn**

HERR special light weight flyers and conical rings make an ideal combination for producing Helanca and stretch yarns.

• See the full line of light-weight bobtail flyers that can take care of nylon and high crepe yarns in a way to produce light tensions at high speeds. HERR flyers are perfectly balanced for accurate yarn control and reduced vibration. Let us show you how HERR can increase the efficiency of your mill.

• If you spin or twist textile fibers, you'll want to find out about these HERR Conical Rings. They stop yarn breakage, permit heavier doffs, keep yarns cleaner and produce smoother yarn.

Ask for help on your problem.

Let HERR help solve your spinning and twisting problems. We'll show you how to adapt your equipment to any textile fiber or blend with HERR Conical Rings and Flyers. Write today!

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... STATE .....

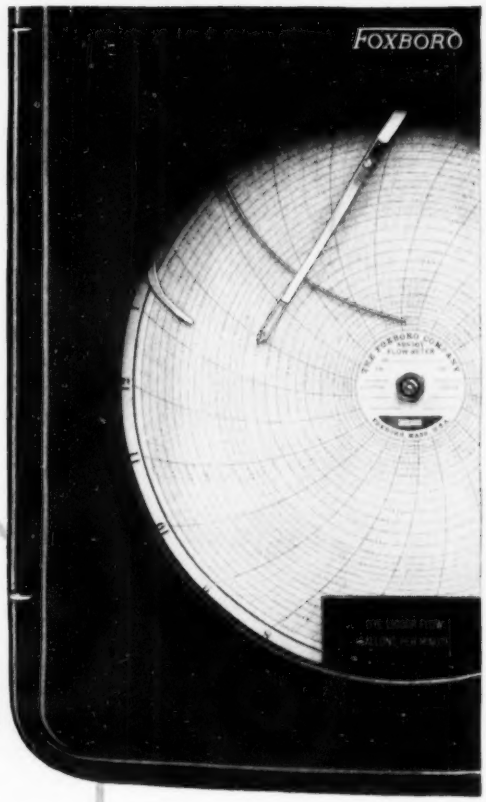
HERR MANUFACTURING CO., INC.

310 FRANKLIN STREET, BUFFALO 2, NEW YORK

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON AND BLENDED YARNS OF ALL TYPES

Know your flow... Reproduce flow rates

...in beam, package, or raw stock dyeing



Dye liquor flowing in either direction creates a difference in pressure between elbow taps A and B. Foxboro d/p Cell measures this differential and transmits it to instrument which records flow in gallons per minute.

WITH FOXBORO DYE LIQUOR FLOW MEASUREMENT you can record both outside-in and inside-out flow in your recirculating-type dyeing machines . . . *with no restriction to the flow.*

Chart record in gallons per minute makes it easy to standardize flow rates per pound of yarn in accordance with dyestuff specifications.

On beam-type machines, varying density can be compensated for with far less danger of "blowing" a beam. Method can also be used to measure individual flows on multiple kier machines.

This new Foxboro System for dye liquor flow measurement can be installed on any recirculating-type dye machine . . . normally without any modification of your equipment. For complete information, write for Engineering Data Sheet 220-52 and installation photographs.

THE FOXBORO COMPANY, 489 NEPONSET AVE., FOXBORO, MASSACHUSETTS, U.S.A.

FOXBORO REG. U. S. PAT. OFF. — **DYE LIQUOR FLOW MEASUREMENT**

FACTORIES IN THE UNITED STATES, CANADA, AND ENGLAND

WELCOME

TO THE 32nd NATIONAL CONVENTION AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS

gdc

PLANTS AT

GRASSELLI, N. J.

•

ALBANY, N. Y.

•

CENTRAL RESEARCH LABORATORY AT EASTON, PENNA.

gdc ANTARA

From these plants come the incomparable assortment of dyestuffs and chemical auxiliaries which contribute in such large measure to the solution of your printing, dyeing and finishing problems. In these buildings are contained the specifications, the controls, the technical know-how which assure the excellent quality and unvarying standardization to provide the answers to your everyday problems.

GENERAL's policy is guided by faithful adherence to fundamentals and perennial responsibility toward our customers. Visit our plants and sales offices and assure yourself that you can "rely on GDC."

WE EXTEND A CORDIAL INVITATION TO VISIT OUR BOOTHS #74-75-76

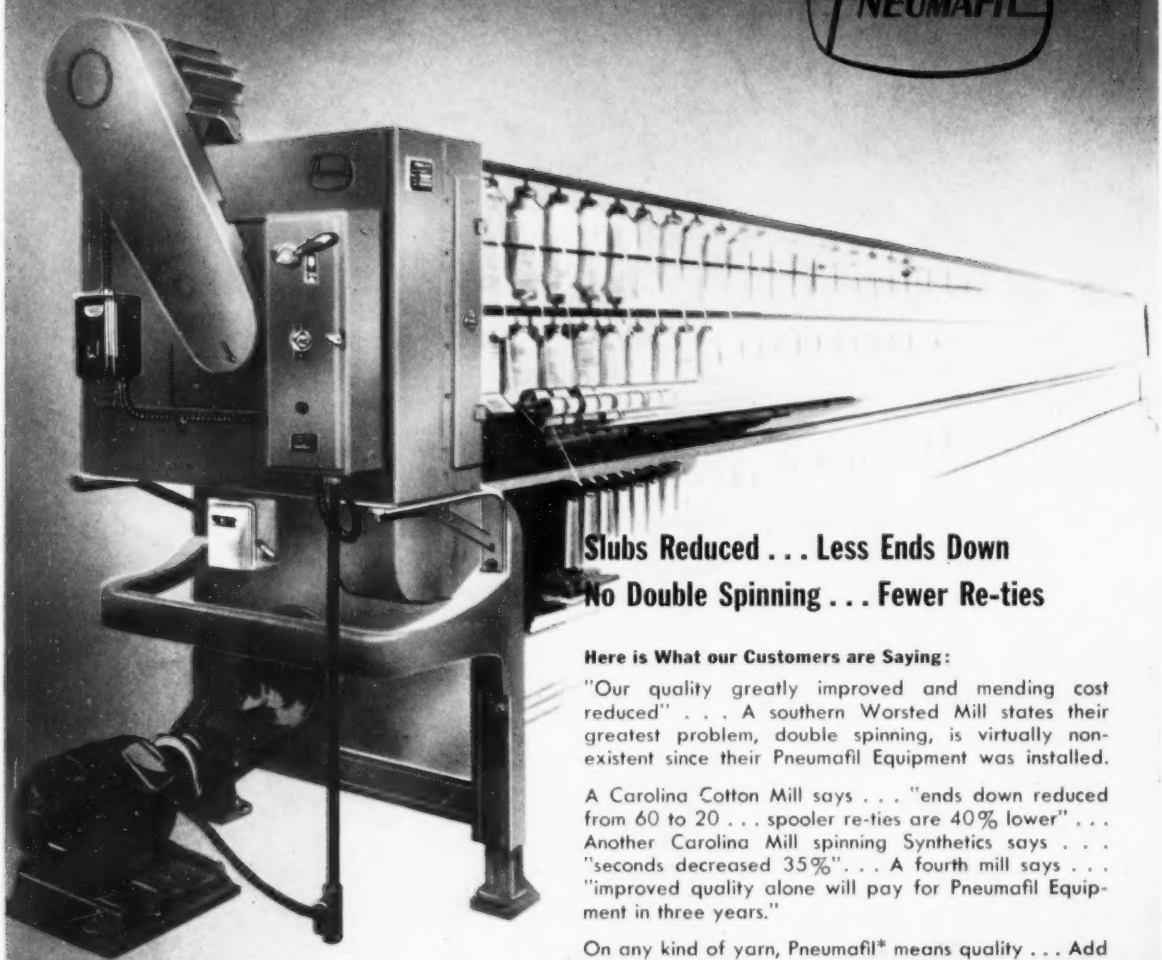
GENERAL DYESTUFF CORPORATION

435 HUDSON STREET · NEW YORK 14, NEW YORK

NEW YORK • BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO

Better Yarn *Means Better Business*

Pneumafil *Means Better Yarn*



Slubs Reduced . . . Less Ends Down
No Double Spinning . . . Fewer Re-ties

Here is What our Customers are Saying:

"Our quality greatly improved and mending cost reduced" . . . A southern Worsted Mill states their greatest problem, double spinning, is virtually non-existent since their Pneumafil Equipment was installed.

A Carolina Cotton Mill says . . . "ends down reduced from 60 to 20 . . . spooler re-ties are 40% lower" . . . Another Carolina Mill spinning Synthetics says . . . "seconds decreased 35%". . . A fourth mill says . . . "improved quality alone will pay for Pneumafil Equipment in three years."

On any kind of yarn, Pneumafil* means quality . . . Add to this lower labor cost (spinners run 33% more frames) . . . increased production . . . savings in waste . . . all of which are being realized every day by Pneumafil* equipped mills, and you can see why . . .

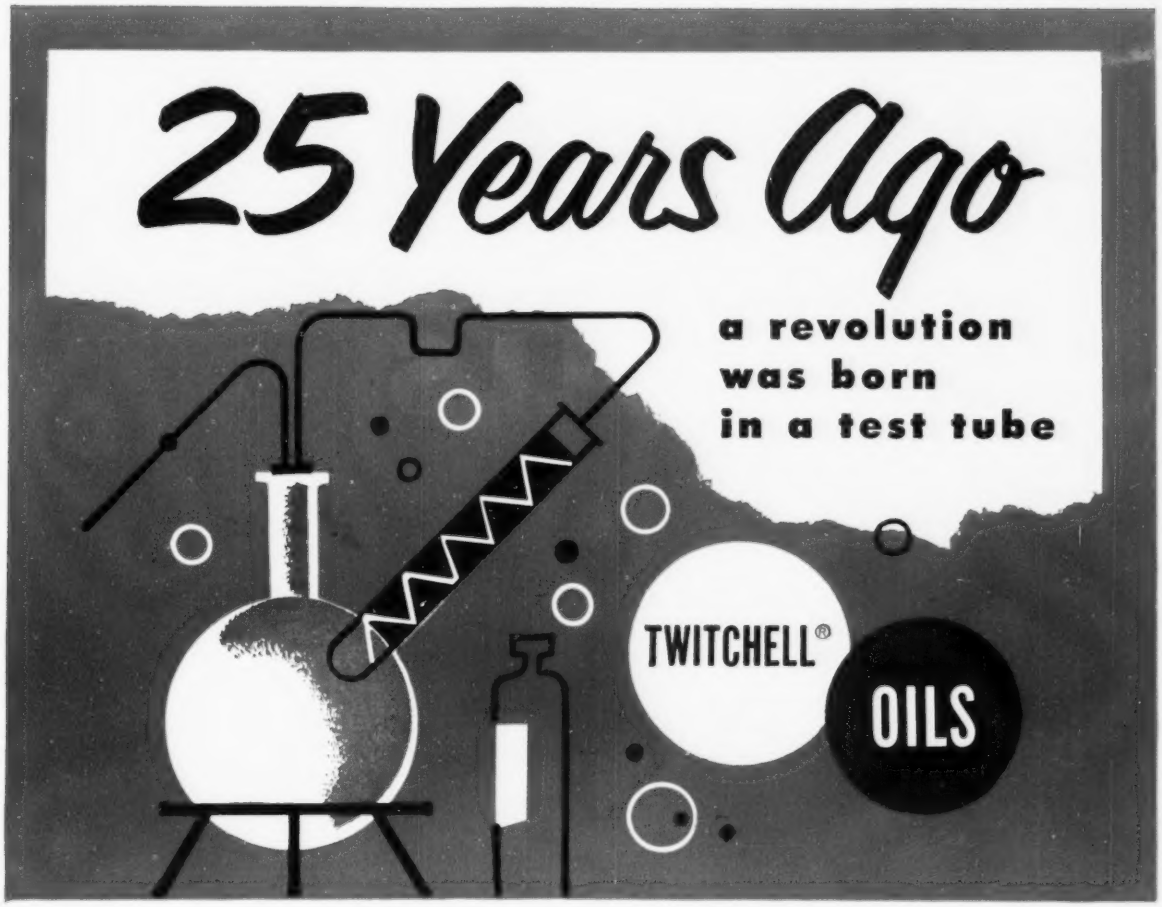
Pneumafil* is the best investment you can make.

PNEUMAFIL CORPORATION **Charlotte 8, North Carolina**

Sales Offices: Needham Hts., Mass. • Atlanta

*Trade Mark

25 Years Ago



DEVELOPMENT OF TWITCHELL OILS REVOLUTIONIZED TEXTILE PROCESSING OILS!

Twenty five years ago, Emery's new Textile Research Program broke the bonds of tradition by introducing *sulfonated mineral oil* type processing oils to the textile field.

Subsequently, the introduction of Twitchell Oil 3X marked the first successful effort to meet the need for faster rewetting in the production of Sanforized fabrics. Likewise, Twitchell Worsted Oil MC and Twitchell 381 Rayon Oil were the forerunners of sulfonated mineral oils for processing woolens, worsteds and rayons. Thus started a *new era* in scientifically compounded processing oils for *all* textile yarns and fabrics.

In the years that followed, changes in composition of the Twitchell Oils kept pace with the technological improvements in textile processing. Today, the modern counterparts of the original Twitchell Oils are used extensively in the processing of Sanforized fabrics, woolens, worsteds, rayon and other synthetics. In addition to giving continuous, trouble-free performance, they also offer the many advantages associated with easy scouring, self-emulsification, non-staining, emulsion stability, anti-static properties, and extreme resistance to oxidation, yellowing and rancidity.

Just as the original Twitchell Oils were an outgrowth of extensive research by Dr. Ernst Twitchell, so will the products of tomorrow grow out of Emery's extensive research to provide processing oils to meet your most severe and changing requirements.

When the Emery representative calls on you, discuss your problems with him. Perhaps one of the regular Twitchell Oils or one in development stages may be the solution you've been looking for. You can be sure when you buy Emery Twitchell Oils.

Emery

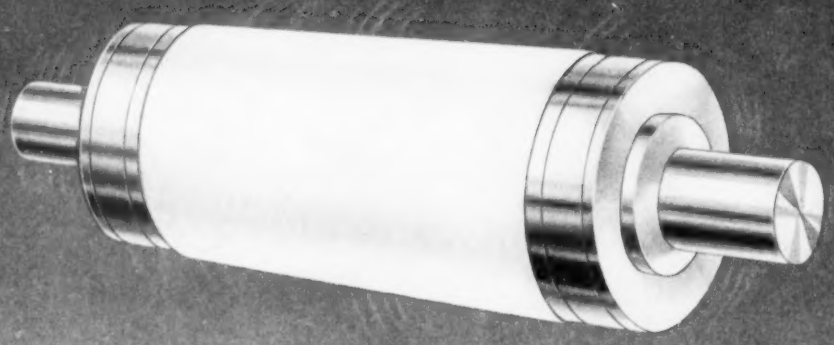
Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers

Emery Industries, Inc. Carew Tower, Cincinnati 2, Ohio

EXPORT: 5035 RCA Bldg., New York 20, New York
New York • Philadelphia • Lowell, Mass. • Chicago • San Francisco

Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles

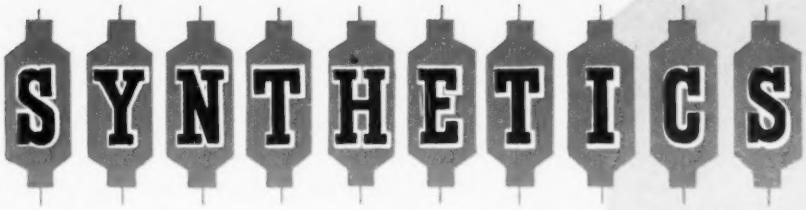
"HOLYOKE" CALENDER ROLLS



HOLYOKE MACHINE COMPANY

CALENDER ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

From FIBER to FABRIC
PROCTOR ENGINEERS
are equipped to supply your processing machinery for



When you are faced with the need for processing equipment—whether it be a single machine or a complete range—your most profitable move is to call Proctor engineers.

Name any synthetic fiber—or virtually any fabric made of a blend of synthetics—and you can be almost certain that Proctor equipment figured prominently into its manufacture.

Proctor engineers have worked closely with the technicians of textile and chemical companies in developing *all types of equipment* for processing synthetics.

At the same time Proctor engineers' experience with "range operation" enables them to consider your process in its over-all light—rather than as individual steps or single pieces of equipment . . . and this is vitally important to you.

Remember too—every installation of Proctor equipment is backed by a thorough analysis of the problem . . . a comprehensive knowledge of sound machinery design and Proctor engineers' reputation for installing systems that perform to guaranteed specifications.

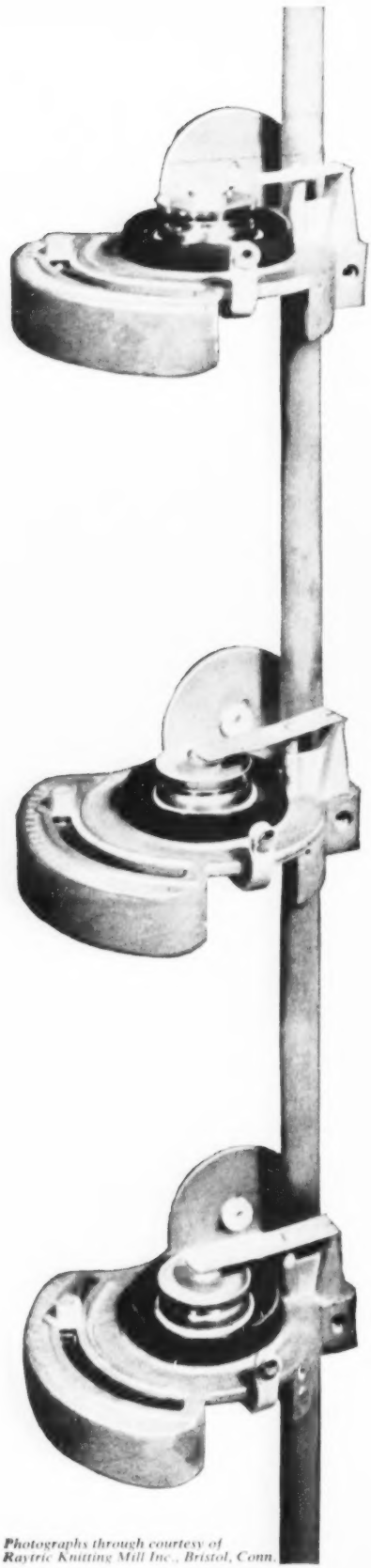
When can we discuss your equipment needs?

Proctor Processing Equipment for synthetics includes . . .

Washing equipment for fibers in tow and staple form
Stretch rolls for orientation of synthetic tow
Emulsion application equipment
Staple openers for opening to varying degrees
Pneumatic staple conveying equipment
Automatic blending systems
Carding machinery
Rayon textile filament yarn bobbin and cake dryers for straight drying or drying in high humidity cycles
Tow dryers (conveyor, drum, or contact and other specialized types) for yarns in tow form
Polymer dryers of various types
Cut staple dryers (conveyor type) for all types of synthetic yarns
Waste dryers (induction type) for rayon cakes drying, twist setting, tire cord, etc.
Cotton linter conveyor type dryers for bleached linters and for redrying linters
Batch and automatic conveyor type dryers for synthetic yarns in skein form
Steam ovens for setting twist in synthetic yarns after twisting
Dryers for synthetic yarns or affiliated products in any specially processed form
Loop dryers and curers for piece goods
Roller dryers and curers for piece goods
Overfed pin tenters

PROCTOR & SCHWARTZ · INC ·

PHILADELPHIA 20 • PA •



how warping creels are TENSION CONTROLLED

The instant you allow yarn tension to control itself, you invite trouble . . . hard and soft quills, shiners, stressed yarns, crushed or warped bobbins, any number of costly failures.

That's why over 500 leading textile mills rely on Kidde Compensators. One plant recently installed over 2,300 Kidde Warp Compensators to regulate the tension on their warping creels. They now report that down-time for creel-cleaning alone has been cut in half!

Kidde Compensators can do as well for you. They are precision instruments that can help you turn out better products at less cost.

Write today for full information.

Photographs through courtesy of Raytric Knitting Mill Inc., Bristol, Conn.

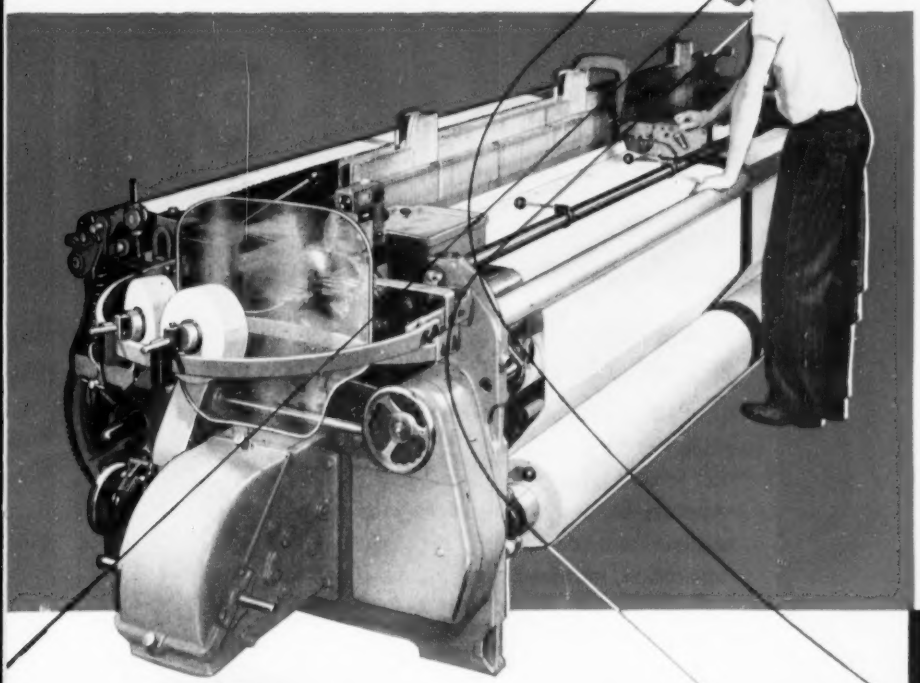
Kidde

Walter Kidde & Company, Inc.,
990 Main Street, Belleville 9, N. J.
Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

● For weaving better quality, more lofty fabrics . . . worsteds, woolens, spun synthetics and blends . . . faster, at much lower costs, with greater efficiency—investigate the exciting profit possibilities of the new . . .

WARNER & SWASEY—SULZER

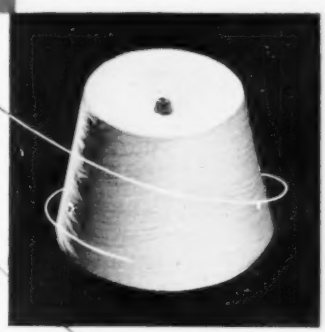
weaving machine



MODELS

M-2820	80" reed
M-2860	95" reed
M-2960	110" reed

- 240 picks per minute
- One or more widths of cloth at one time
- Larger, stationary filling package



WARNER & SWASEY
Cleveland
TEXTILE MACHINERY DIVISION

SALES OFFICES

Main Office and Factory: 5701 Carnegie Ave., Cleveland 3, Ohio
61 Rivulet St., North Uxbridge, Mass.
6910 Market St., Philadelphia, Pa.
Candler Building, Atlanta, Georgia
1820 Browning Ave., Charlotte, N. C.

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

Perkins Rolls—Perkins Calender—Perkins Hydraulic Power Unit—Ideal combination

This 54" three-roll hydraulic friction calender—thirty-five ton pressure. Top chilled iron roll 12" diameter, intermediate cotton roll 22" diameter, bottom iron roll 18" diameter. Hydraulic unit combining efficiency with quiet operation, enclosed for maximum safety.

There is no substitute for Perkins quality

B. F. PERKINS & SON, Inc.

ENGINEERS AND MANUFACTURERS

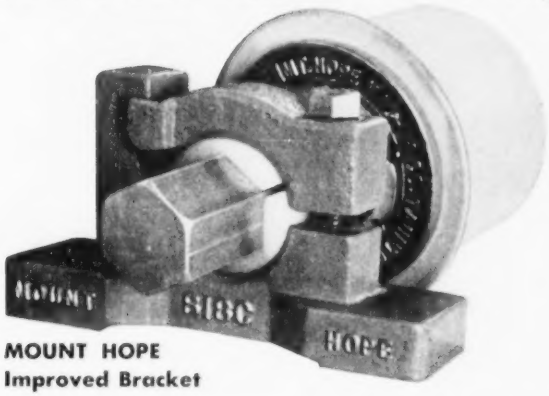
HOLYOKE, MASS.

LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

Mount Hope FREE WHEELING EXPANDERS

NEW IMPROVED MOUNTING BRACKETS for Mount Hope Expanders

Simpler than ever to Mount, Dismount and Adjust



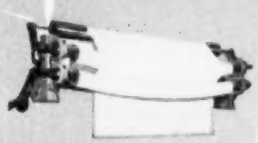
MOUNT HOPE
Improved Bracket

This completely new 2-piece bracket of malleable iron has a *single* clamping bolt and nylon ball clamp — another in our continuous series of significant improvements in Free Wheeling Expanders. Advantages include:

1. **Operator can now take Expander from machine without time or effort to remove bracket.**
2. **Construction saves space.**
3. **Adjustment is simplified, rotation much easier.**

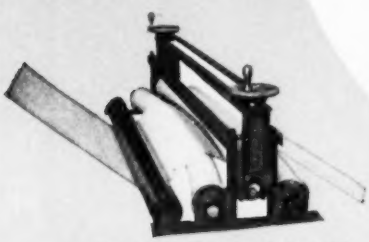
Write today for details or Have a Mount Hope Engineer solve your particular expanding problems without obligation

FREE WHEELING EXPANDER

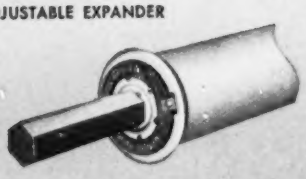


SLACK SELVAGE ELIMINATOR

BATCHER EXPANDER



3 BAR ADJUSTABLE EXPANDER



SEALED END EXPANDER

MOUNT HOPE
MACHINERY COMPANY
15 FIFTH STREET • TAUNTON • MASS.

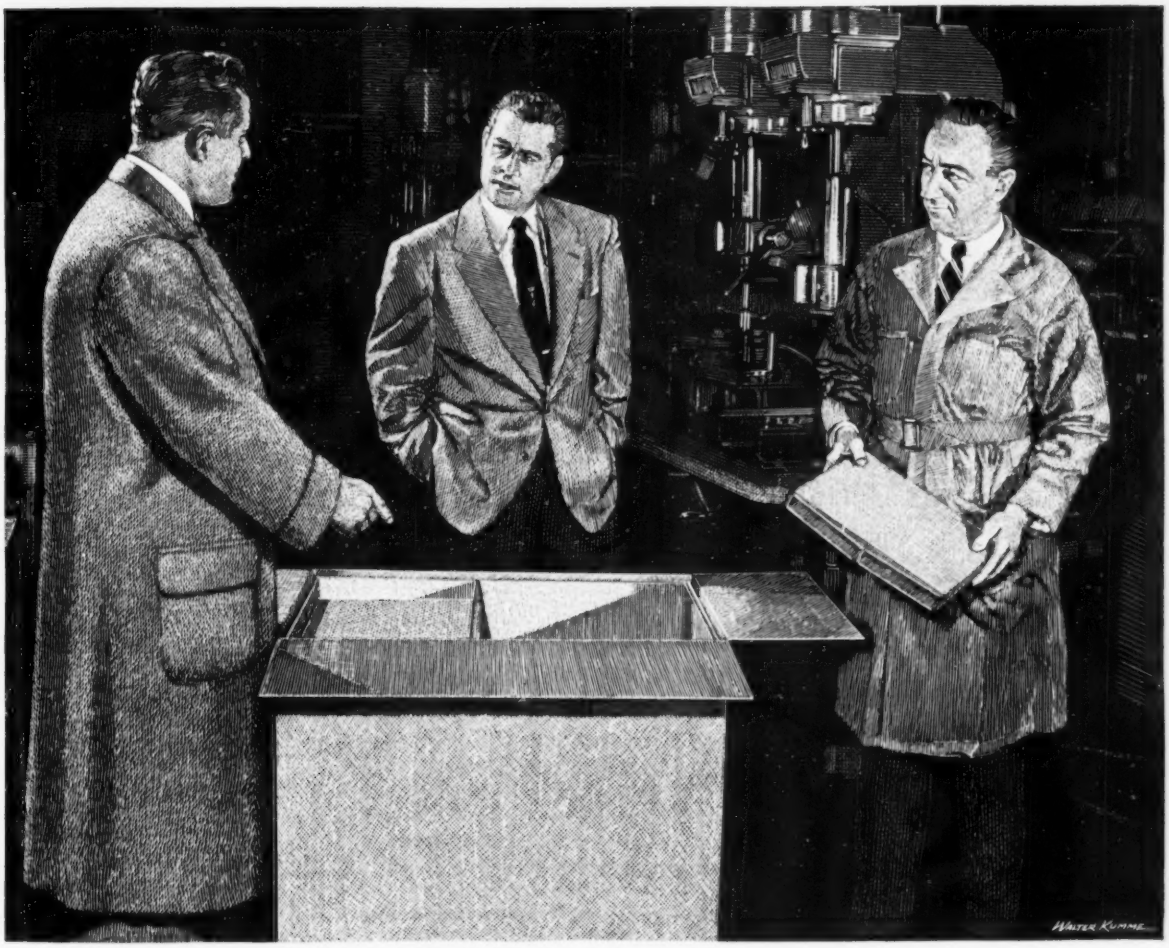
TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK



Put A Gaylord Man On Your Team... It Pays Off In Reduced Packing Costs

One manufacturer is saving 75% in packing costs and 55% in container weight with his new Gaylord-designed "package".*

Your savings may not be as great . . . but a Gaylord man, working with management, design, production and purchasing, is almost certain to come up with cost-cutting suggestions for tough packing problems.

Look in the classified pages of your phone book under "Boxes (Gaylord)" for the Sales Office nearest you.

Name and address on request.

Gaylord Boxes

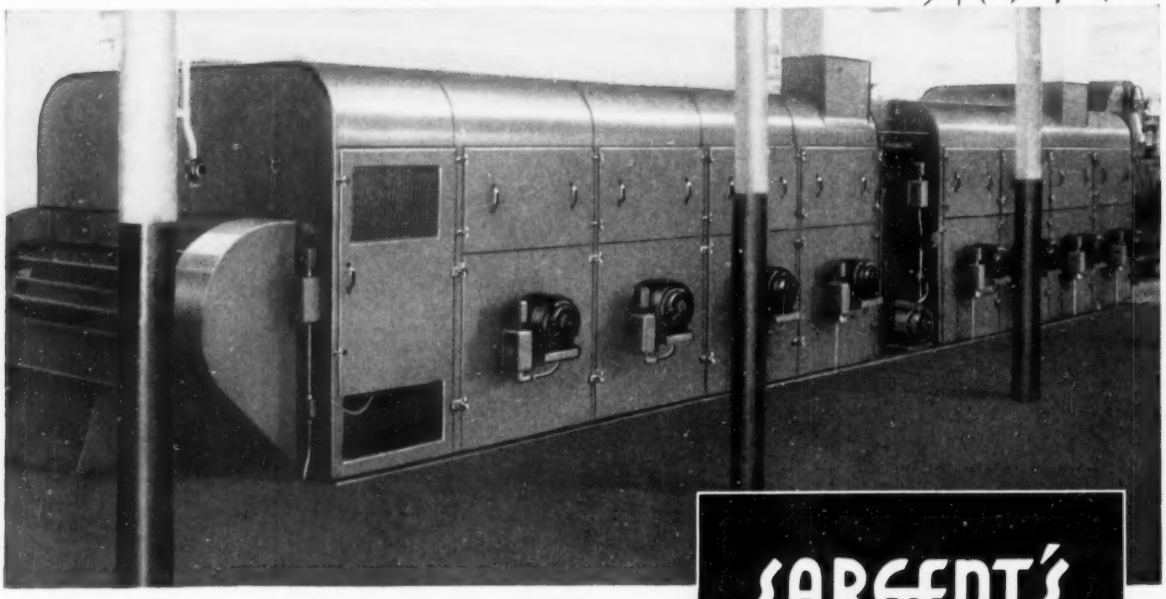
Their seen and unseen quality gives you an extra margin of safety.

GAYLORD CONTAINER CORPORATION

General Offices: **ST. LOUIS** • Sales Offices Coast-to-Coast

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT BAGS AND SACKS • KRAFT PAPER AND SPECIALTIES

The Simplest, Most Compact Downdraft Dryer Ever Built!



SARGENT'S SINGLE APRON DRYER

ANY FIBRE • ANY BLEND

LEADER IN ITS FIELD FOR . . .

PHENOMENAL PRODUCTION — per sq. ft. of conveyor drying area . . . continuous, automatic, trouble-free, economical operation — year in, year out . . . takes amazingly small floor space.

SIMPLICITY OF DESIGN AND OPERATION — easy to assemble . . . curved top provides continuous air flow (no corners to "pocket" air currents) . . . adds to compact, streamlined appearance . . . high velocity fans of latest design directly connected to standard-frame ball-bearing motors . . . so placed there is continuous cool-air-flow around them . . . vibration-free . . . heavily insulated, rugged housing . . . NO HEAT LOSS.

ACCESSIBILITY — quickly, easily cleaned . . . least down-time between lots . . . inspection panels conveniently placed, easily removed for inspection of work in process.

LOW STEAM CONSUMPTION — ingenious arrangement of coils, screen-protected . . . thermostatic controls . . . all add up to minimum operating cost. Designed for either low or high pressure steam.

WONDERFULLY QUIET OPERATION — s-m-o-o-t-h conveyor to carry fibres at all speeds . . . built of heavy-gauge steel sectional flights . . . variable speed, covered chain drives . . . Fisher-type rotary feed.

Let us show you . . .
how this Dryer will cut your costs. Please write your nearest representative, or write us direct, for complete details.

C. G. SARGENT'S SONS CORPORATION

Graniteville, SINCE 1852 Massachusetts

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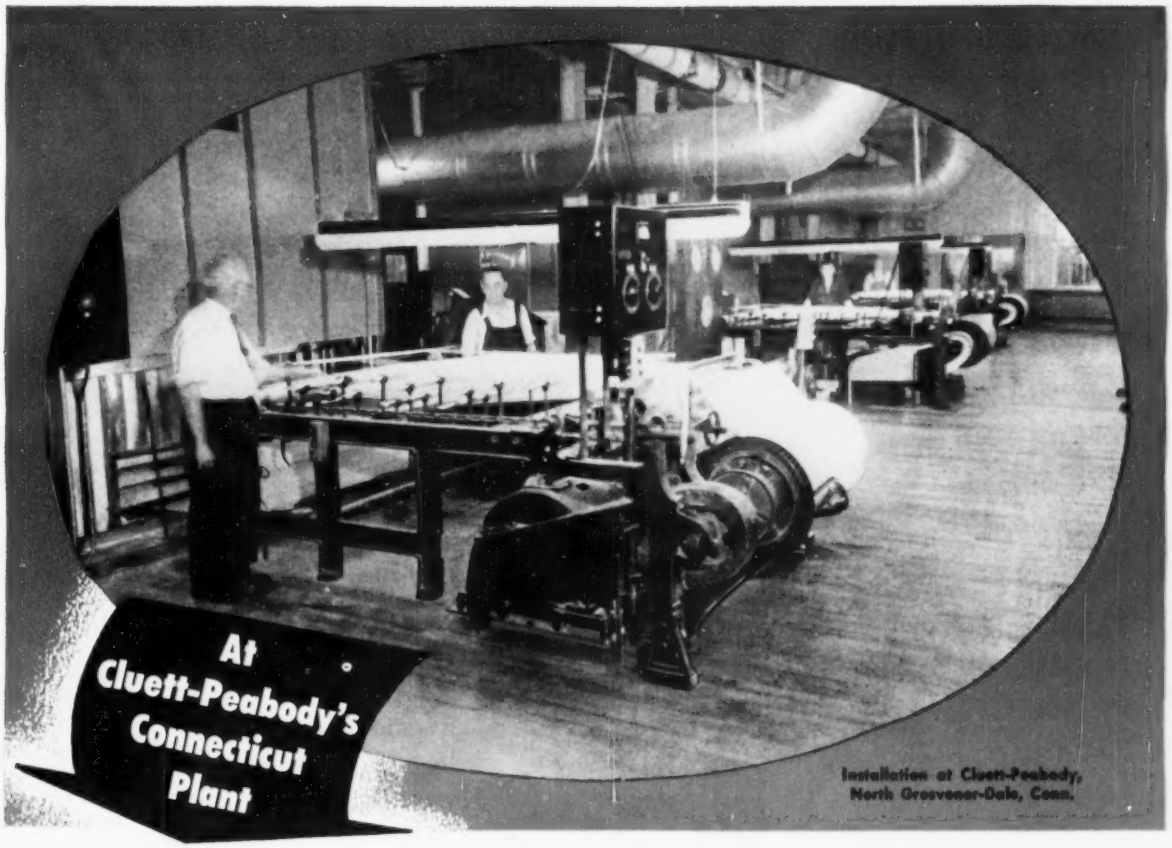

Installation at Cluett-Peabody, North Grosvenor-Dale, Conn.

6 Slashers are reduced to 3 with Uxbridge *Gentle-Air* Dryers*

In the installation shown here, the three Uxbridge "Gentle-Air" units do the work of all 6 old type slashers they replaced. Uxbridge "Gentle-Air" has proved superior over a period of years because —

1. It was developed from the mill man's point of view, to suit practical needs — not merely to produce a new machine.
2. It operates with any type of size on any type of spun yarn — cotton, woolen, worsted, man-made or blend.
3. It insures even drying with minimum stretch of the yarn, dries with as little as 1.35 lbs. steam at 24 lbs. pressure per lb. of water evaporated. Instant cooling of dryer prevents injury to either natural or man-made fiber.
4. It brings slasher room performance into line with the productive capacity of your modern looms and spinning frames.

Easy to install, the Uxbridge "Gentle-Air" Dryer operates between front and back ends of any conventional slasher, new or old. To our knowledge, not one mill that has tested Uxbridge "Gentle-Air" has thereafter installed a slasher of any other make. Write for descriptive bulletins, without obligation, or have our Engineering Department study your slasher room problems — with no sales follow-up unless you specifically request it.

SEND FOR:

BULLETIN A: Maximum Production Model, up to 1780 lbs. per hour.

BULLETIN B: Normal Production Model, up to 750 lbs. per hour.

BACHMANN UXBRIDGE WORSTED CORPORATION
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Representatives:
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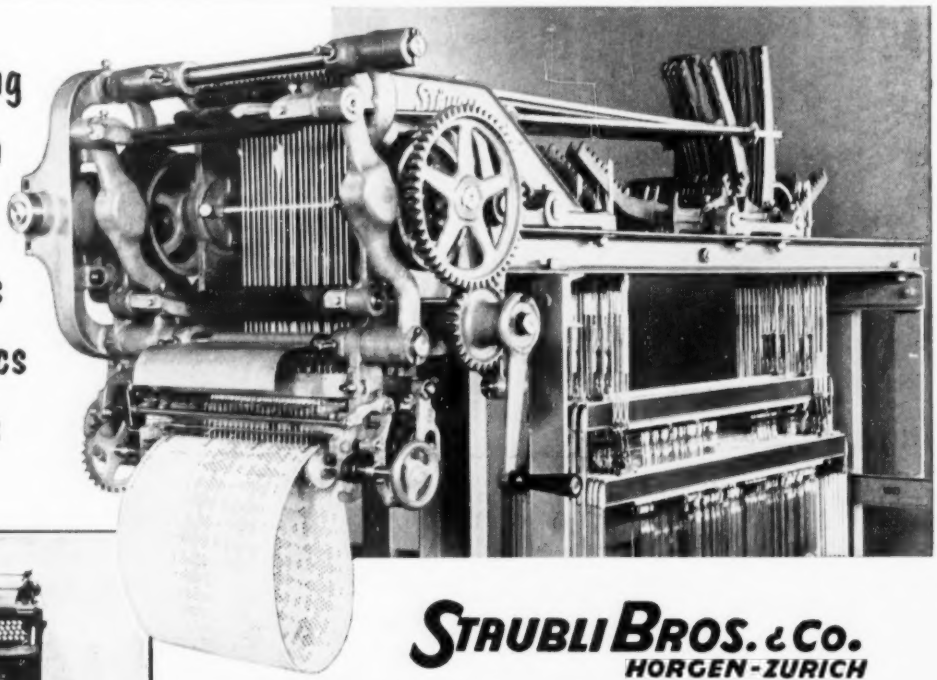
More warps & Better warps

*"Mill-Proved" Products — developed and manufactured by Uxbridge from the mill man's point of view. Uxbridge Chalker for filling winders. Uxbridge Easy-Rid Textile Chalk. Uxbridge Control Spray for pin drafters.

How to increase loom efficiency and flexibility...

A Cost-cutting Combination for quick Changeovers to New Fabrics and Designs



CARD-CUTTING MACHINE

Built especially for use with Staubli Paper Design Dobbies, this card-cutting and copying machine has no equal as a time and labor-saving device. A skilled operator can punch 2-3 picks per minute for the first pattern. Fully automatic copying of pattern chains can then be done at the rate of 160-200 picks per minute. One rolled yard of special, low-cost pattern paper represents 600 picks.

STAUBLI BROS. & CO.
HORGEN-ZURICH

PAPER DESIGN DOBBIES and CARD CUTTING MACHINES

Are the looms in your mill operating with real efficiency? Are they quickly adaptable to sudden changes in fabrics and designs? If you must honestly answer "no" to either of these questions, your profit position in today's highly competitive market may be in danger. You can avoid the possibility of loss — increase the efficiency and flexibility of your present looms — by installing Staubli Paper Design Dobbies and Card Cutting Machines.

Staubli Dobbies are cam driven, operating smoothly even at high speeds of 200 picks per minute. Cams can be supplied for keeping the shed open during 60°, 90° or 120° of one revolution of the crank shaft. The shed changes rapidly, preventing fuzzy yarn from sticking together. The pick finder opens any shed without affecting the take-up roll. It is also used to lower harness frames for shut down periods avoiding set marks when restarting. These and many other special features combine to make the Staubli Dobby a wise investment for every mill.

Write today for descriptive literature and information

H. J. Theiler CORPORATION
WHITINSVILLE • MASS.

EXCLUSIVE DISTRIBUTORS

Hasler S.A. Berne
CENTRAL RECORDING INSTALLATIONS
DIFFERENTIAL INDICATORS
TACHOMETERS

Sam. Vollenweider LTD.
"ROBOT" REED AND HEDDLE
POLISHING MACHINES
"WAM" SELVEDGE TRIMMING MACHINE

E. FRÖHLICH AG.,
HEDDLES and DROP WIRES
WITH RECTANGULAR EYES
HARNESS FRAMES

PFISTER FIRST IN NAPHTHOLS
Pfister Chemical Works
INC.
ever see so many helping hands
just to make good fabrics better?
Every fabric is a product of the farmer or the chemist, the yarn-maker, the weaver, the dyer and the finisher. All strive for better products to please a consumer who becomes more and more exacting. Nothing will please the consumer more than a fabric dyed with Pfister naphthols. The Pfister trademark is your guarantee of perfection.
PFISTER CHEMICAL WORKS
RIDGEFIELD, NEW JERSEY
Southern representative – Dyer S. Moss Company
Charlotte, North Carolina

Where can YOU use these unusual

Since their introduction less than two years ago, Masoneilan 60000 Series Controllers have won wide acceptance through superior performance, great versatility, and simplicity of adjustment and operation. We believe that you, too, will like these "Instrument Man's Instruments" once you have seen them.

The Proportional-Reset Controller
Note that all settings are accessible without removing chart.

A HIGH Cq Quality Coefficient PRODUCT

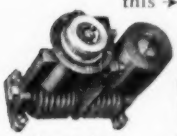
Pneumatic Controller Advantages?

Consider versatility for example. In *one* instrument you can obtain *all* these...

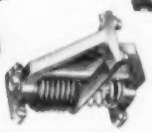
ON-OFF CONTROL
simply by setting the Proportional Band Wheel to minimum proportional band — like ← this. Action may be either direct or reverse.

DIFFERENTIAL GAP CONTROL
by turning the Proportional Band Wheel to the "Gap" quadrants, either direct action like ← this or reverse action like this →

PROPORTIONAL CONTROL
by setting the Proportional Band Wheel to the required proportional band in the direct action quadrant like ← this or the reverse action quadrant like this →



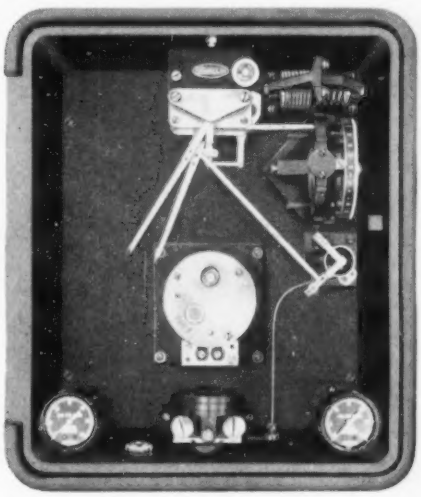
Reset Unit



Proportional Unit

PROPORTIONAL-RESET CONTROL
by substituting the Reset Unit for the Proportional Unit. No piping changes — you simply plug in the unit, realign (one adjustment), turn Proportional Band Wheel to desired direct or reverse action quadrant, and set required reset rate.

Or if versatility is not important to you, consider these advantages to the Instrument Man—



PILOT — of amplifying, balanced type is easily serviced because of its simple construction and cleanable orifice.

MANIFOLDED AIR PASSAGES — with plug-in connections, eliminate pressure fittings and clutter of tubing; facilitate interchangeability of individual subassemblies and accessibility of adjustments.

NOZZLE — is *easily* removed, cleaned, replaced and calibrated.

MINIMUM OF ADJUSTMENTS — with large knobs or wheels provided for making them; plus easily read scales to aid in settings.

SIMPLICITY — of unit subassemblies, and of their arrangement, for ease of adjustment and servicing.

If you have not already seen these controllers we suggest you arrange for a demonstration in your own office or plant. Simply write or telephone our office nearest you. It will help to solve *your* control problem.

MASON-NEILAN
REGULATOR COMPANY
1194 ADAMS STREET, BOSTON 24, MASS., U. S. A.

Sales Offices or Distributors in the Following Cities: New York • Syracuse • Chicago • St. Louis • Tulsa • Philadelphia • Houston Pittsburgh • Atlanta • Cleveland • Cincinnati • Detroit • San Francisco • Boise • Louisville • Salt Lake City • El Paso • Albuquerque Charlotte • Los Angeles • Corpus Christi • Denver • Appleton • Birmingham • New Orleans • Dallas • Seattle Mason-Neilan Regulator Co., Ltd., Montreal and Toronto

...with TYCOL lubricants on hand!

The Lube that was "Tailored" for Textile Mills! Here's what we mean by lubricants "engineered to fit the job": awhile back, the Engineering Department of a well-known mill asked us to develop an oil that would meet their exacting loom lubrication requirements. After intensive study of the problem, we came up with Tycol Amortac 76. In actual loom usage, we *proved* Amortac to be easy to handle and virtually "splatter-proof," even when looms are being blown down. Result? An oil that features initial low cost . . . that by itself satisfies complete loom lubrication requirements (no chance of a lube mix-up!) . . . minimizes 'seconds' . . . will not build up with lint while feeding through the bearing opening. In every way, Amortac 76 is engineered to do a specific job. One reason why it pays to consult your local Tide Water Associated office . . . first!

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Over 300 Tycol industrial lubricants are at your disposal . . . engineered to fit the job!

REFINERS AND MARKETERS OF VEEDOL . . . THE WORLD'S MOST FAMOUS MOTOR OIL

CALCO dyelines

Advertisement No. 33 of a series

PREPARED BY AMERICAN Cyanamid COMPANY CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT, Bound Brook, New Jersey
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

Calco®

A Good Match-Maker

Certain Milling Yellows exhibit phototropism, which is the property of changing shade when exposed to light. On being returned to storage in the dark, the original shade will be

restored. When a dyeing has this property, it is difficult to produce a match because marked differences in shade occur between exposed and unexposed areas of the material.

Materials dyed with Calcocid* Milling Yellow R as a self shade or in combination with other dyes are free from this objectionable property of phototropism and therefore they remain on tone after drying and airing.

Large poundages of Calcocid Milling Yellow R are being used by the woolen industry to produce self and combination shades, as a good economical yellow component in union dyeing, and in dyeing some of the newer hydrophobic synthetic fibers. We particularly recommend it for the dyeing of materials to be used for bathing suits and sports wear.

A Cellulosic Dye that Likes Wool

Calcodur* Red 8BL is one of the most level dyeing types available to the dyer. This quality, combined with its bright red shade and high tinctorial strength, makes Calcodur Red 8BL a desirable dye to use as a base for reds, crimsons, maroons and Burgundies. Calcodur Red 8BL works well in combination with other dyes and produces uniform, well penetrated shades even at low temperatures.

Calcodur Red 8BL is popular with dyers of blended fabrics as it produces uniform, full-bodied shades on cotton, rayon and wool blends. Although it is primarily a cellulosic dye, Calcodur Red 8BL has excellent affinity for wool even when dyed below the boil. Acetate effect threads remain white under most dye-bath conditions.

Two Popular Oranges

Calcomine Oranges have been established colors in textile mills for many years. Calcomine* Fast Orange 2RS Conc. dyes cellulosic fibers almost to the exclusion of animal fibers and therefore, is recommended for cellulosic and wool blends where the wool is to be lighter in shade or in heathers where the Cellulosic fiber is to be dyed an orange and the wool a contrasting shade. Calcomine Fast Orange 2R has a much greater affinity for wool, pure silk and nylon than has Calcomine Fast Orange 2RS Conc. Both dyes leave cellulose acetate pure white.

Excellent money value is obtained with these oranges because they exhaust well, yielding rich full bodied shades of reddish orange.

For the Textile Bookshelf

Application of Dyes to New Synthetic Fibers (Calco Technical Bulletin No. 826). A carefully compiled record of existing data on the new synthetic fibers. Dyeing methods for the coloring of the new synthetic fibers and fastness properties to look for are covered in this paper.

Identification of Synthetic Fibers by Microscopical and Dye Staining Techniques (Calco Technical Bulletin No. 831). Review of stain and microscopical identification tests which have been found very useful in determining the fiber composition of materials being colored. This is often difficult because of the many combinations which are possible and because of the newness of many of the fibers.

*Trade-mark

Calco is practically in your backyard now that helicopter mail and aircargo service has been established between municipal airports and Bound Brook.

For NO-SLIP GRIP, it's U.S. RAINBOW® V-BELTS

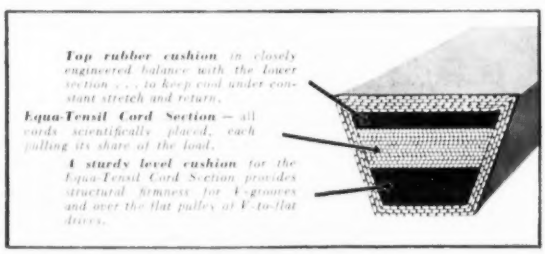
Why U. S. Rainbow V-Belts are superior: No. 1 in a series.

You can be sure there will be no slipping on the drive when you use a U. S. Rainbow V-Belt. Straight sidewalls grip the grooves the full height of the belt, providing the complete contact which results in much greater pulling power and eliminates slippage.

Every ounce of excess stretch has been worked out mechanically before leaving the factory, yet the belt still remains sufficiently elastic to withstand heavy shock loads.

Every U. S. Rainbow V-Belt has the extra advantages of the unique Equa-Tensil Cord Section—a scientifically developed "U. S." construction that brings together in a balanced unit the concentrated strength of the multiple pulling cords, distributes the pulling of the load so evenly among the cords that each carries its full share. The U. S. Rainbow V-Belt absorbs shocks with ease and still retains a sturdy no-slip grip.

Order from your jobber, or contact any of our 25 District Sales Offices, or write to address below.


Top rubber cushion in closely engineered balance with the lower section . . . to keep cool under constant stretch and return.
Equa-Tensil Cord Section — all cords scientifically placed, each pulling its share of the load.
A sturdy level cushion for the Equa-Tensil Cord Section provides structural firmness for V-grooves and over the flat pulley at V-to-flat drives.

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"U.S." Research perfects it.
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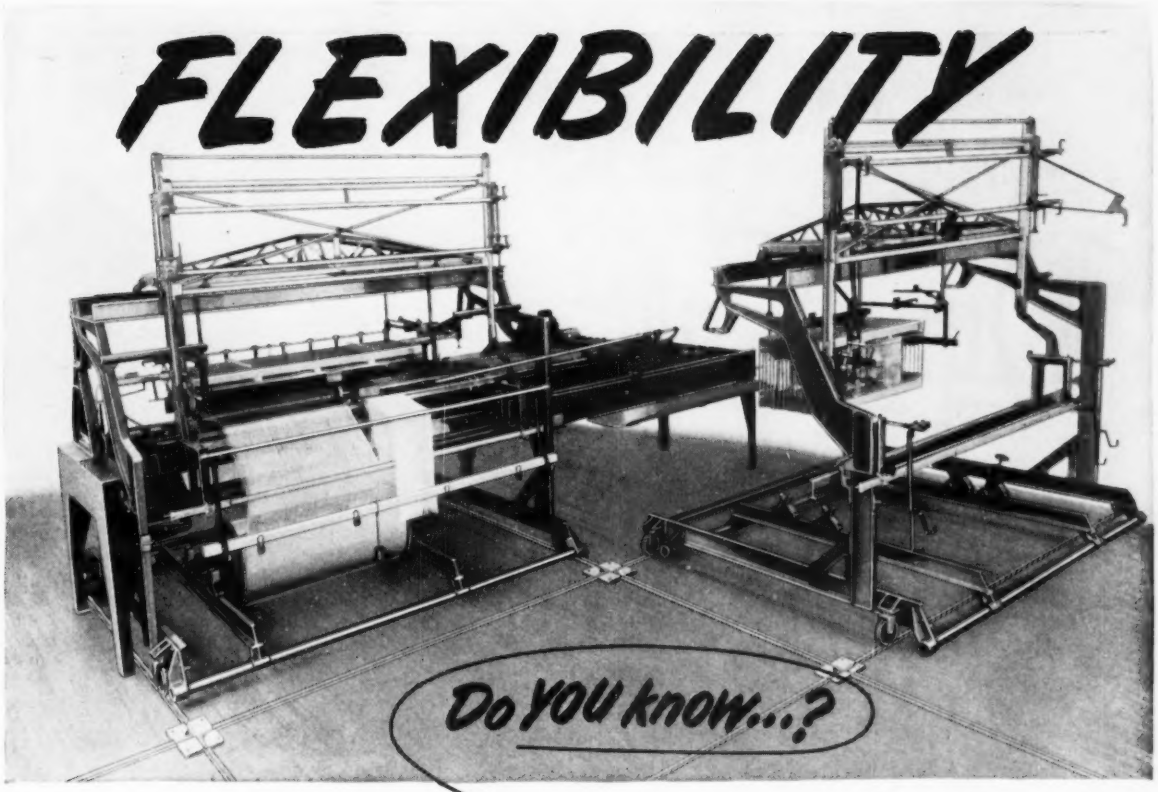
FLEXIBILITY



BARBER-COLMAN
WARP DRAWING MACHINE

- That these machines will draw a range from 15 denier to 35, or the equivalent in other counts.
- That style changes are *easily* made.
- That you can vary the materials being drawn with *no time lost.*
- That varying the width of warp involves *no* mechanical changes.
- That heddle frame lengths may vary.
- That a machine will accommodate heddles from 11″ to 17″ deep.
- That beams up to 32″ head can be handled.
- That while one warp is drawing, you can be loading or unloading others.
- That a machine will draw from flat sheet or leased warp, two of either or any combination.

REMEMBER— Plan now to attend the 1954 SHOW . . . the American Textile Machinery Exposition, April 26 through 30, 1954, at Atlantic City.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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Dyna-Salt

IMPROVES

dyeing of synthetics

When you dye Dacron, Orlon, Dynel and other man-made fibers — alone or blended — use Dyna-Salt in conjunction with Dynadye-V. You'll get better results than you've ever gotten before.

Dyna-Salt, a readily soluble, white, 100% active powder lowers pH to maximum efficiency when used with Dynadye-V, a solubilized substituted phenol with excellent wetting and penetrating qualities. Dyna-Salt stabilizes the bath without the use of strong acids. It's safer for your workers. It's safer for your fibers. It releases its acidity very slowly, gives you greater bath control and greatly improves dye leveling properties. It lessens the chance of scum or "lake" formation, prevents decomposition of dye-stuffs.

Dyna-Salt, in conjunction with Dynadye-V, may be used with Azoic and Acetate colors — assures true deep shades, rich, even colors. Get the full story — write for technical data sheets, or call the Amalgamated Representative.

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AMALGAMATED CHEMICAL CORP., Philadelphia 34, Penna.
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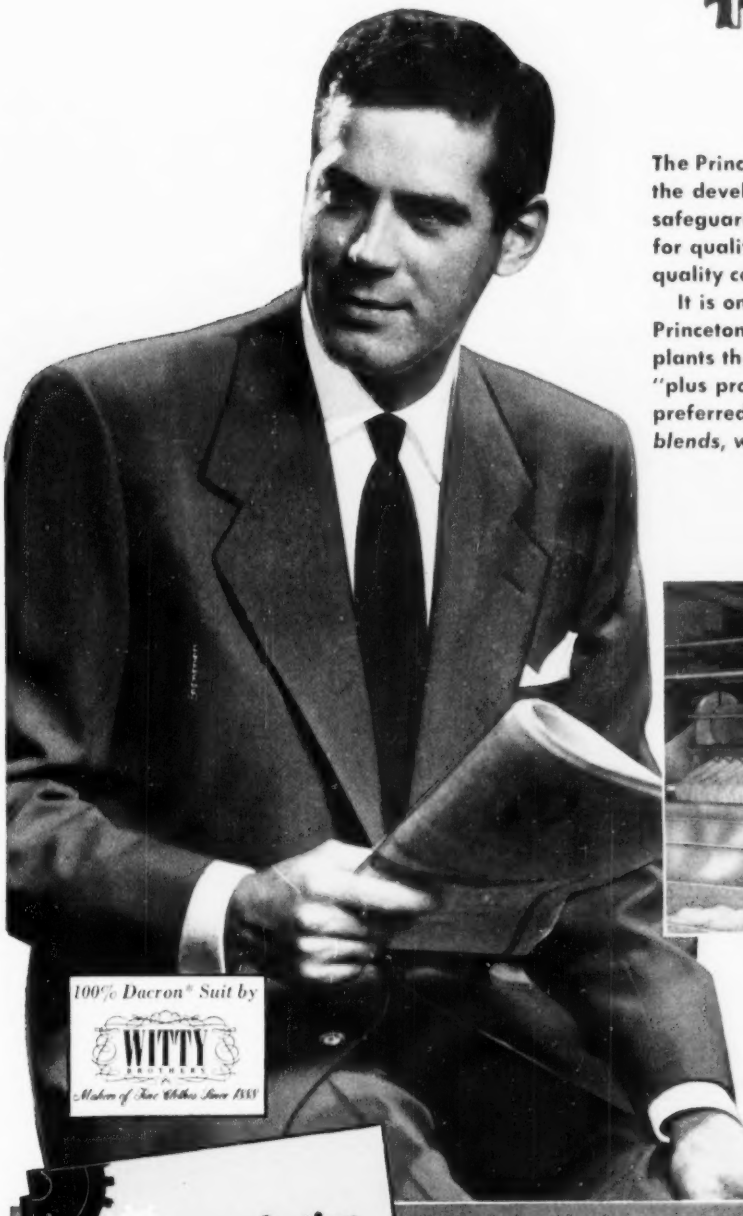
Hosiery and Fabric Finishes, Dyeing Assistants and Scouring Agents

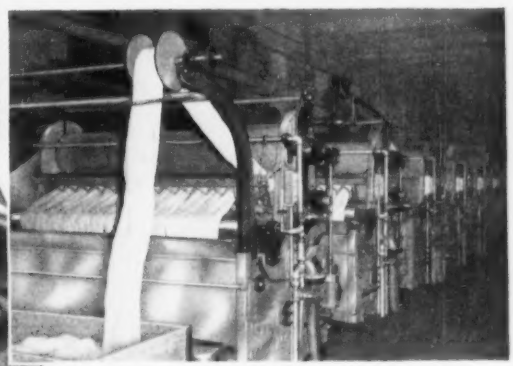
Amalgamated

HUNTER *equipment safeguards quality at* Princeton WORSTED MILLS



The Princeton Worsted Mills, pioneer in the development of 100% Dacron* fabrics, safeguards its enviable reputation for quality production by maintaining strict quality control in every phase of manufacture.

It is only natural, therefore, that in Princeton mills . . . as in many other fine plants throughout the world . . . Hunter "plus production" equipment is preferred for the finishing of *synthetics, blends, woolens* and *cottons*.



The Hunter Continuous Cloth Washer, used in line with a Hunter Scutcher and Pneumatic Squeeze Rolls, affords continuity of production from fulling mill through dryer. This novel Washer is maintaining high production levels at Princeton Worsted and other leading mills. Send for BULLETIN CCW.

*DuPont TM for Polyester Fiber

plus production

- efficient operation of modern equipment
- less down time of equipment
- quick, easy repair . . . rapid parts delivery

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BUILT BY HUNTER . . . IT'S DEPENDABLE

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS, MASS.

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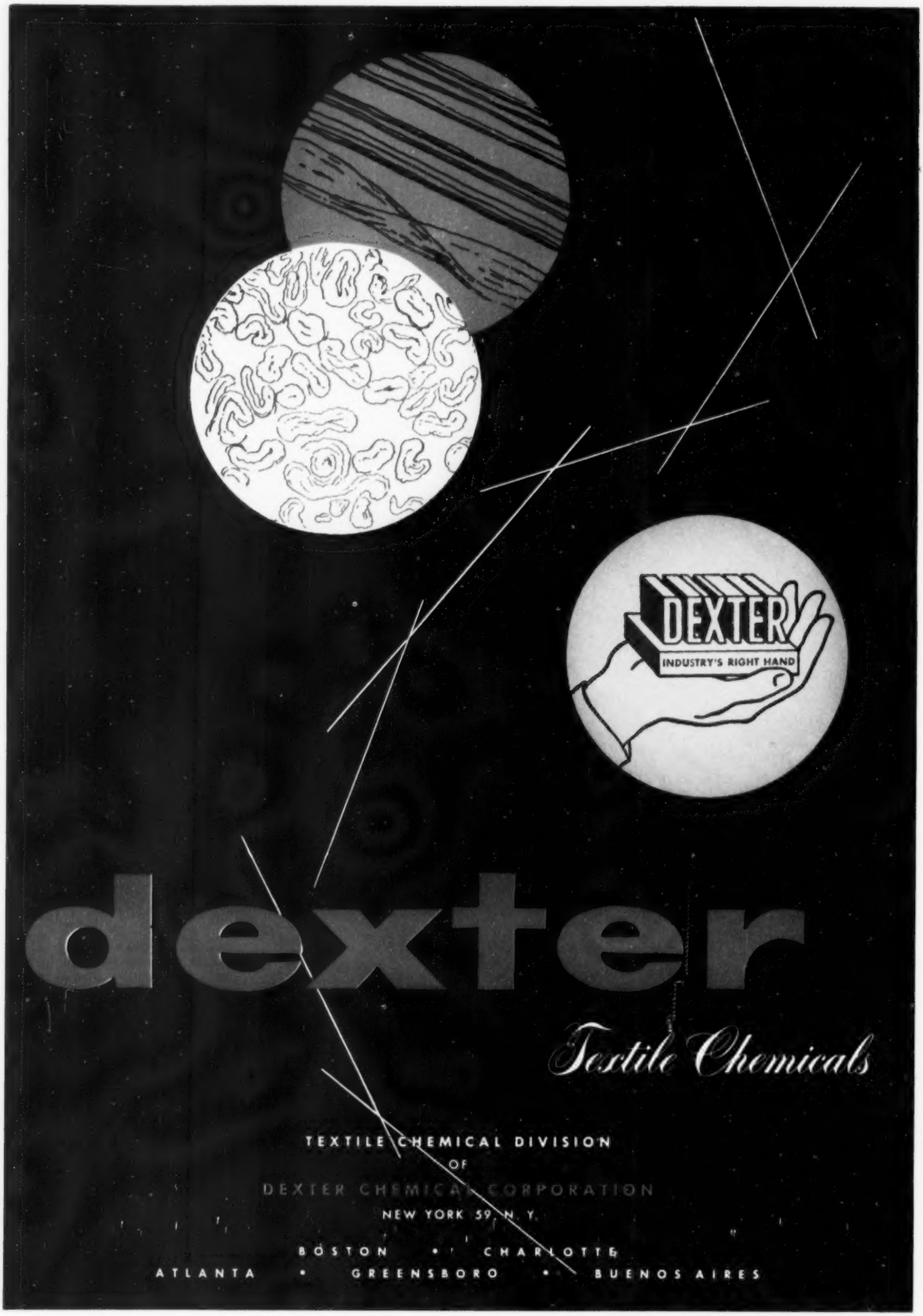
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QUESTION

How many products can be made from

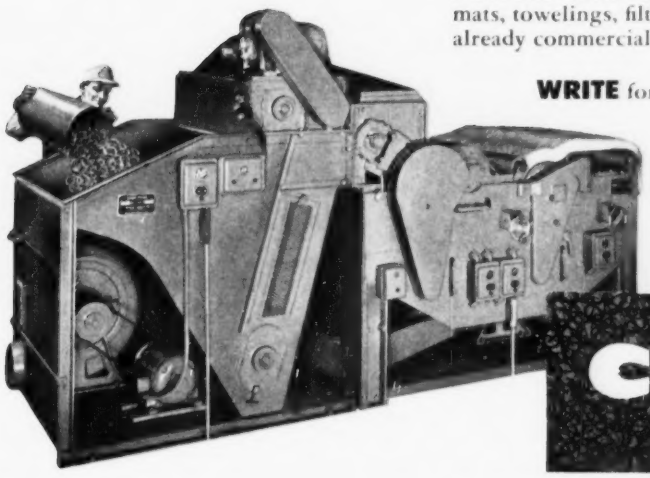
RANDOM WEBS

ANSWER *Unlimited number . . .*

Your ingenuity is the only determining factor

Random fibers (non-oriented) webs or mats can be processed into hundreds of end products . . . products that are now being made by costlier processes from more expensive materials . . . products that are still in the laboratory. Random webs can be made from practically any waste or staple fibers by themselves or in combination. Fibers as diverse as cotton mill waste, nylon, glass, wool noils, asbestos, wood fiber, jute, rayon waste have been made into webs. Products such as insulations, reinforcements, mats, towelings, filters, drapes, clothing interlinings are already commercially manufactured.

WRITE for New Bulletin No. 102. Inquiries are welcome.



TEXTILE DIVISION

CURLATOR

CORPORATION

EAST ROCHESTER, NEW YORK

This is the tag you can hang your hat on

Celaperm*, Celanese pigment-dyed acetate yarn with the "sealed-in" color, is catching on everywhere, because Celaperm is the name with the future. Not only does it answer a basic need in home furnishings and a basic need in swimwear. Not only does it add a profitable plus to ready-to-wear. But Celanese is merchandising Celaperm on a trade-up basis that promises profits, not mark-down to the people who use it.

Promotionally, Celanese is putting its heaviest guns behind Celaperm.

We are ready with tremendous color pages in Life Magazine. In Good Housekeeping. In Sunday Supplements. In every prominent shelter book.

These are not merely ads. They are backed up with solid selling at the retail level.

Furthermore, we are ready with an identification program. The coveted Celanese* Celaperm parasol tag shown above will be granted only to those fabrics submitted to Celanese in which all color components are sealed-in color acetate fiber. We will ascertain this before we issue the Celaperm parasol tag.

We believe Celanese Celaperm offers one of the greatest merchandising and promotional opportunities now available in the textile industry.

It is the fiber with a future.

Can we talk about its future with you?

*Reg. U. S. Pat. Off.

Celanese

CORPORATION OF AMERICA, NEW YORK 16

Let's talk OPERATIONS

. . . hosiery preboarding and finish boarding, that is. Check your present equipment — are you cutting your profits with one-operation machines? A Turbo AD-48 will do both — without a single mechanical change. And — you'll have from 120 to 130 dozen pairs of stockings every eight hours, with only one operator.

In preboarding, automatic steam pressure controls and accurate timing assure quality production. In finish boarding, fan circulated hot air is directed on the stocking with greater air flow to the welt and toe for thorough, even drying. Steady, automatic temperatures give you static-free stockings.

Operation is smooth, quiet and precise — there is no banging or jolting. A Turbo AD-48 is gentle as a lamb with your finest stockings.

Send today for complete information about the advantages of using the Turbo AD-48 — enjoy the benefits of more "firsts", better profits. Inquire too about the rest of the Turbo machines for quality hosiery finishing, you'll get a prompt reply.

TURBO MACHINE COMPANY

Lansdale, Pennsylvania, U.S.A.

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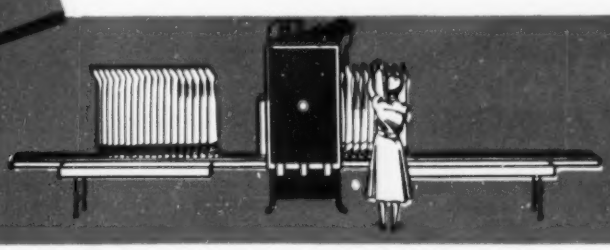
TURBO

"Gentle as a Lamb"



Setol Cleanser HAS WHAT IT TAKES TO MACHINE-SCRUB OILY FLOORS—

Faster cleaning action!

Cuts operating time of the scrubbing machine

Finnell 213P Scrubber-Vac

Applies cleanser, scrubs, and picks up — in ONE operation!

Because *Setol* is specially compounded for the greater speed of *combination-machine-scrubbing*, it must *and does* work faster than average alkaline cleansers. *Setol* saponifies *and emulsifies* grimy oil and grease *instantaneously*. The wetting agent in *Setol floats the oil* for fast, easy, *and thorough* removal by the vac of a *combination machine* or with a separate vac unit. And because *Setol* stays fast-acting longer—does not spend its strength quickly as do ordinary oil and grease solvents—less is required to clean a given area. Thus *Setol* saves on materials and, by speeding the cleaning process, cuts operating time of the scrubbing machine . . . reduces labor costs . . . and saves on brushes. Best of all, *Setol gets floors oil-free clean!* Also acts as a disinfectant (contains pine oil), and leaves a pleasant, clean aroma.

- **A constant, fast-acting cleanser for machine-scrubbing cement, wood, wood block, metal, stone, and terrazzo floors**
- **Consistent use on cement floors prevents cement dusting . . . provides a finish that helps seal out waste materials**

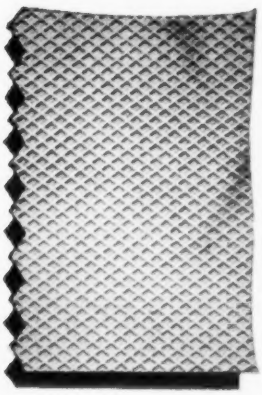
For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1309 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

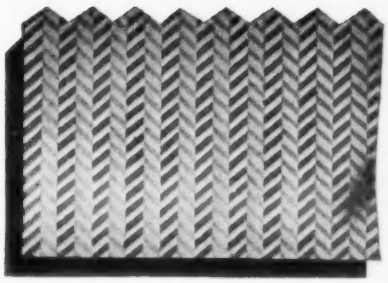
FINNELL SYSTEM, INC.

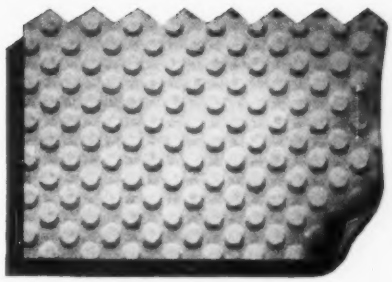
Originators of Power Scrubbing and Polishing Machines

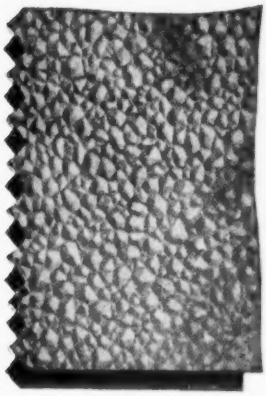
50th Anniversary

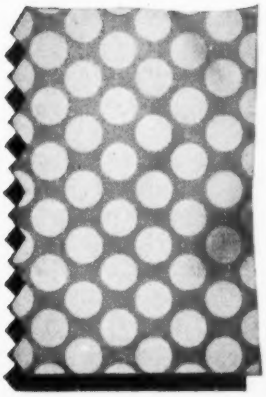
BRANCHES IN ALL PRINCIPAL CITIES











Embossed finishes... of all types... that stand up... after repeated washings...

Calendering and RHONITE R-1 just naturally go together—whether the desired effect be plain, chased, friction, Schreiner or deep embossed. And RHONITE R-1 gives you an important plus value, too—its wide range of calendered effects, from plain to moiré, outlasts repeated washings. It will pay you to get full details of this extra durable embossing resin, RHONITE R-1. Write us today.

RHONITE R-1 *is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.*

This month in national magazines millions will see this spotlighted loom-finished taffeta . . . which dries spot-free without a trace of raindrop ring.

Monsanto turns a 'spot' light on loom-finished taffeta

Stymer LF is the key to loom-finished fabrics that resist water-spotting!

The lady in her rain-spattered party dress may seem remote from your weaving room.

But as you know, the weaving of solution-dyed yarns into "ready-for-market" fabrics brings with it many advantages—including processing economies for the mill and an attractive, color-fast product for the consumer. With loom-finishing came the need for a durable size. Monsanto developed Stymer LF to meet this need . . . and today it has become standard for solution-dyed yarns. Sizing your warps with Stymer LF makes it possible to produce loom-finished fabrics that do not water-spot—fabrics with a crisp, marketable hand that will not become raggy after dry cleaning.

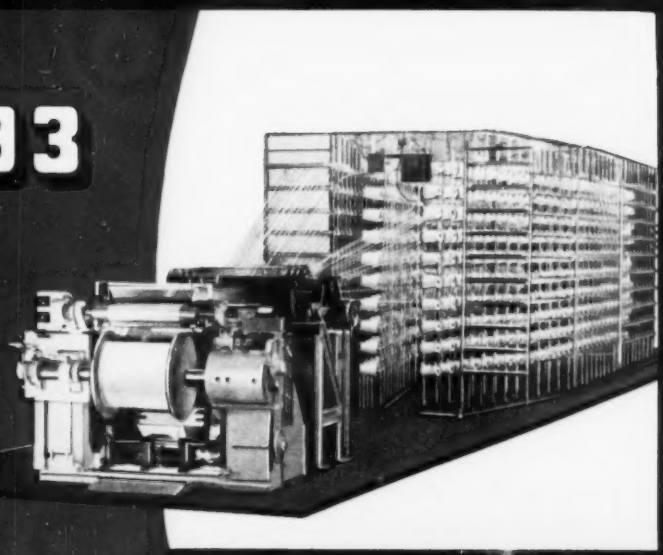
For complete details on how Stymer LF will enable you to take *full advantage* of the loom-finishing process, get in touch with: MONSANTO CHEMICAL COMPANY, Textile Chemicals Department, Boston 49, Mass.

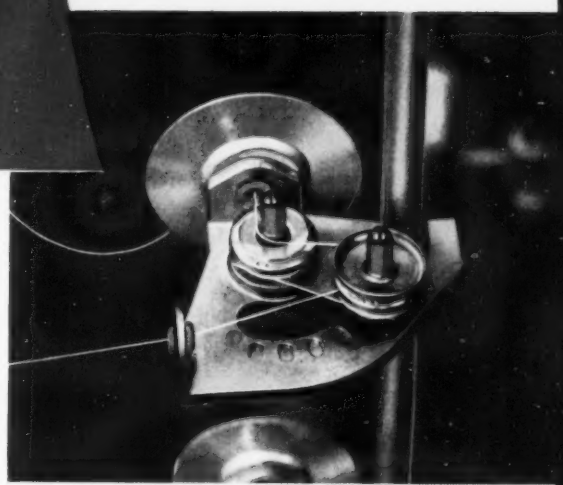
Stymer: Reg. U. S. Pat. Off.

MONSANTO® SERVING INDUSTRY . . . WHICH SERVES MANKIND

Evening separates by Nellie de Grab . . . of loom-finished taffeta woven by J. P. Stevens & Company.

ALSIMAG® 193 GUIDES are STANDARD EQUIPMENT ON THE NEW Cocker WARPER AND CREEL





Cocker knows what AlSiMag guides will do because they have used them on various creels for five years or more. To build better and faster equipment, Cocker constantly tests and checks every possible improvement. Based on facts thoroughly proved by years of operation by many different mills, Cocker standardized on AlSiMag guides for their splendid new warper and creel. Cocker's customers have found from actual experience that AlSiMag guides are lowest in cost per pound of yarn processed. The extreme hardness of these homogeneous guides means extra long life even when running abrasive yarns at high speed.

AlSiMag 193 guides are conductors of electricity. Properly grounded, they assist in the control of static. Cocker uses these guides in satin finish. This satin finish gives light tensions and also further reduces static.

If you are running abrasive yarns, AlSiMag guides can save you a lot of money. An AlSiMag guide is available for almost any textile machine . . . and if you require a special design we can make it to your sketch or blue print.

AlSiMAG NO. GE-25358-A

AlSiMAG NO. GU-18462-A

MORE AND MORE LEADING MACHINERY MANUFACTURERS ADOPT AlSiMAG GUIDES AS STANDARD EQUIPMENT

TEST SAMPLES of guides in our files sent without charge. Test samples to your specification made at reasonable cost without tool or die costs.

AlSiMAG NO. GE-18398 | AlSiMAG NO. GE-22048 | AlSiMAG NO. GE-17204 | AlSiMAG NO. GE-22785

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AMERICAN LAVA CORPORATION

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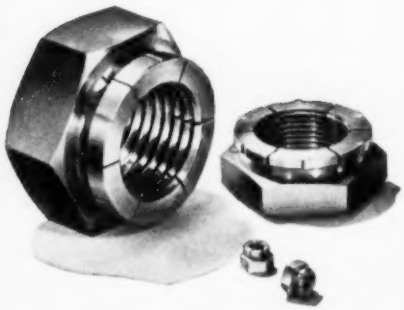


Just what are these Flexloc nuts?

"They're nuts that lock and stay put on a bolt. Once you install them, you can forget them. They sure save a lot of time in maintenance. Look at this shuttle assembly, it's fastened together with FLEXLOC *Self-Locking Nuts. We haven't had to put a wrench on it since we installed it."*

Nuts that work loose cause real trouble. Machinery is often damaged and stopped. Production suffers, deliveries lag, and you lose money. But there's a sure way to keep nuts where they belong. Specify and install FLEXLOC Self-Locking Nuts.

Standard FLEXLOCS have higher tensile strength than most other locknuts. They are one piece, all metal. And one nut covers the entire temperature range to 550°F. Stocked by leading industrial distributors. Increased capacity enables us to make quantity shipments of FLEXLOCS in a wide range of sizes. Write for literature and samples. SPS, Jenkintown 34, Pa.

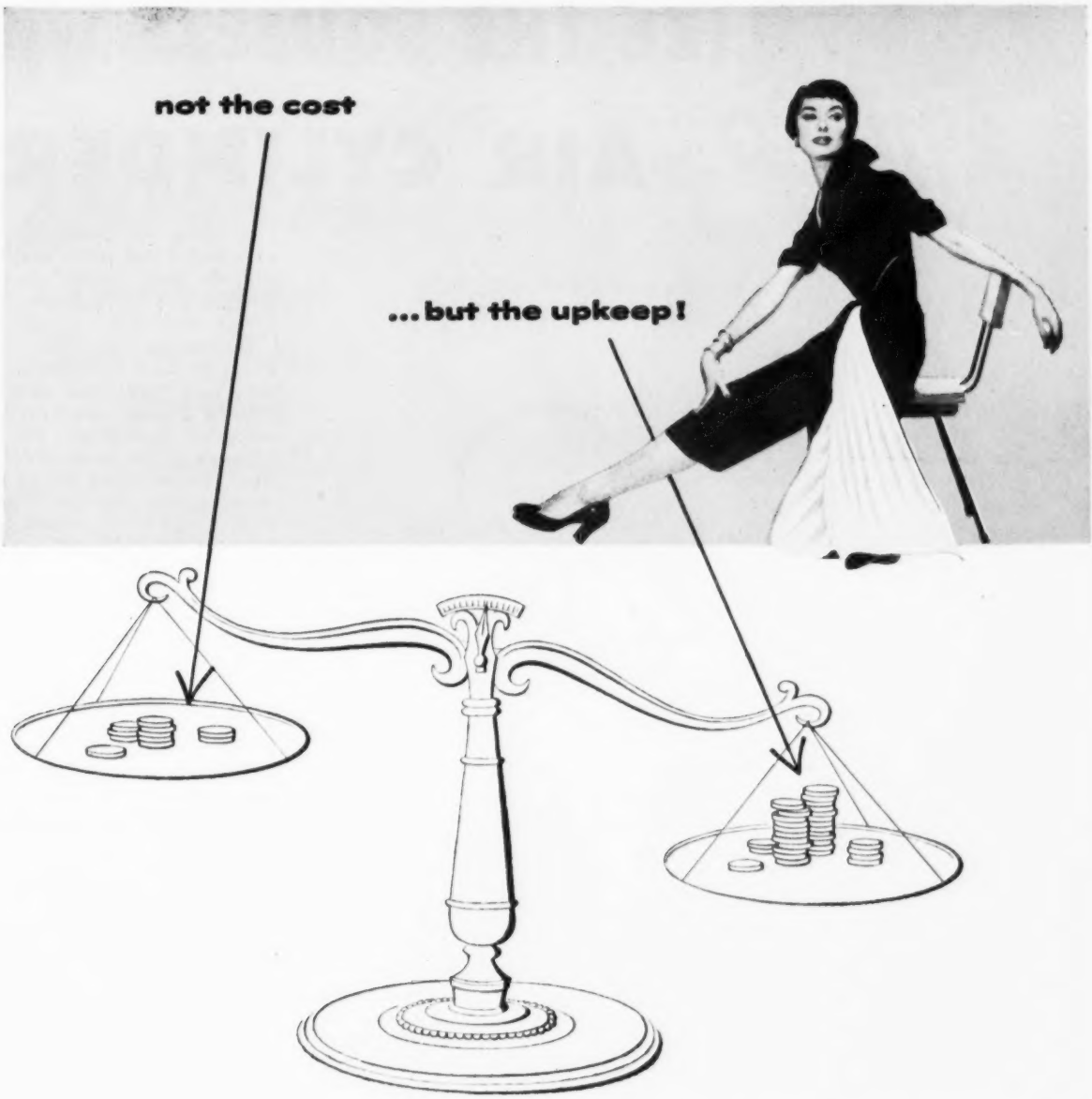
FLEXLOC

LOCKNUT DIVISION

SPS

JENKINTOWN PENNSYLVANIA

Our Fiftieth Year : A START FOR THE FUTURE



This old complaint is fast becoming a thing of the past. Now, fashions made with Du Pont's modern-living fibers offer beauty *plus* practicality. Now, customers may have smart styles that stay fresh-looking, wear longer and require *less upkeep* . . . in time, money and effort.

Easier, low-cost care is just *one* of the many advantages you can build into the fabrics you create with Du Pont's modern-living fibers. You can use them, too, to offer unique textures, rich colors, pleat and shape retention, feather-weight warmth . . . and the many other practical plusses that fit the way Americans live today

Count on Du Pont's leadership to help you keep pace with the newest advances in fiber research. Use Du Pont's modern-living fibers to create fabrics for today's customers, and tomorrow's . . . fabrics that satisfy, fabrics that sell.

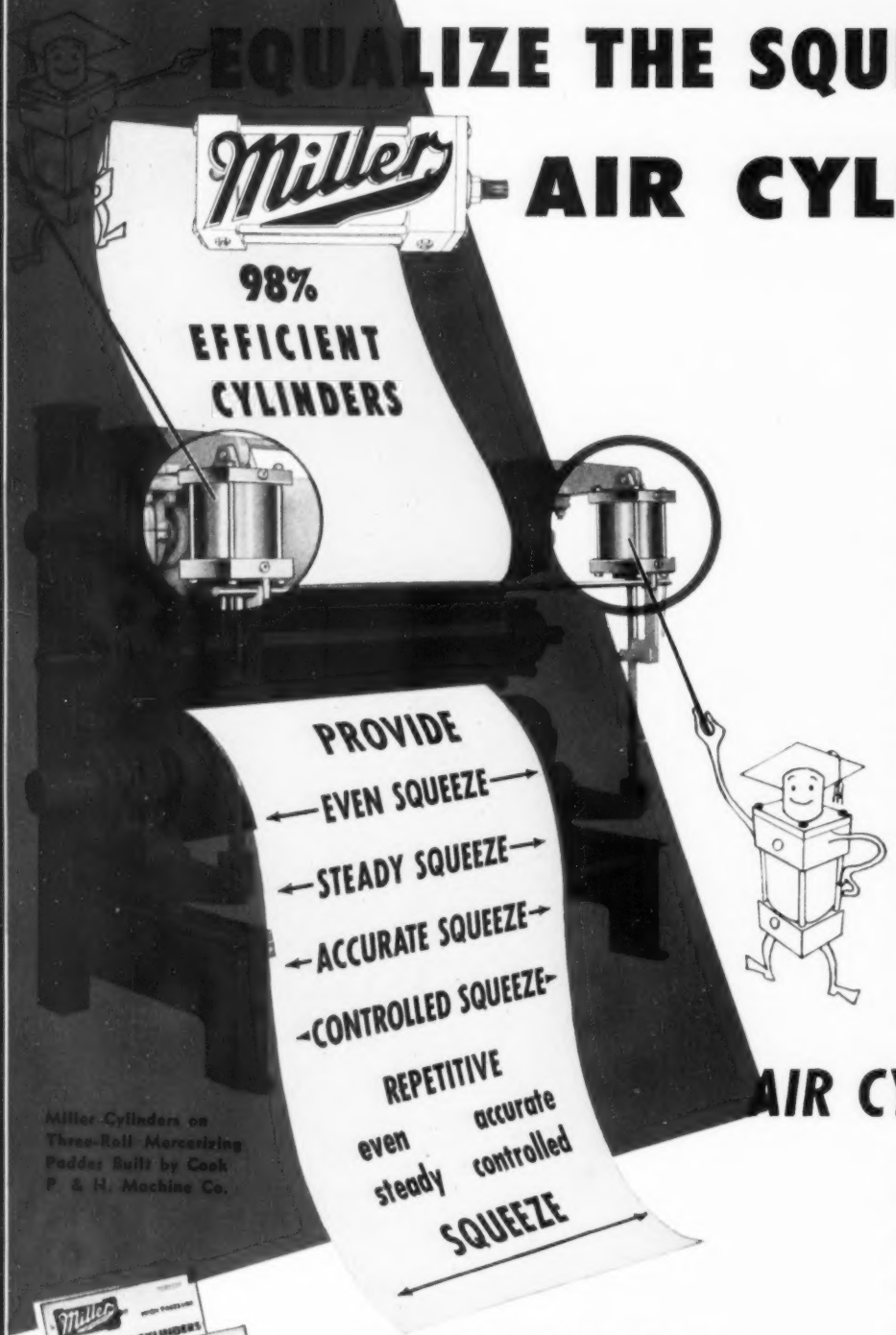
DU PONT'S MODERN-LIVING FIBERS

NYLON) RAYON) ACETATE) ORLON® ACRYLIC FIBER) DACRON® POLYESTER FIBER)

DU PONT

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

EQUALIZE THE SQUEEZE with Miller AIR CYLINDERS



Miller Cylinders on Three-Roll Mercerizing Padder Built by Cook P. & H. Machine Co.

Two Miller Air Cylinders (one at each end of the pressure roll) provide the steady, even "squeeze" so essential for the pressure rolls of Textile machinery.

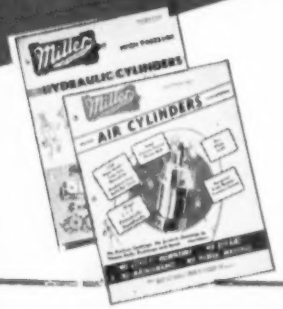
The variation in friction co-efficiency in these cylinders is practically negligible. Thus, whether the pressure is to be constantly held or reapplied as required, the "twin" cylinders can be depended upon to react simultaneously and in perfect unison to the slightest adjustment. Also, any desired pressure on the rolls can be duplicated and maintained at will.

These top performance qualities are "built-in" features of Miller Standard Air Cylinders proven 98% plus efficient (at 80 psi). The Miller Non-Adjustable Seals assure consistency of performance throughout cylinder life. This consistency is further guaranteed over exceedingly long periods of time by such standard Miller features as solid steel heads and caps, hard chrome plated piston rods, dirt wiper seals and non-corrosive cylinder barrels.

Miller

AIR CYLINDERS FOR

- **Padders**
- **Washers**
- **Steamers**
- **Rope Squeezers**
- **Bleaching Equipment**
- **Dyeing Equipment**
- **Other Textile Machinery**



WRITE FOR CYLINDER BULLETINS A-105 and H-104

Complete Miller cylinder line includes: air cylinders, 1½" to 20" bores, 200 PSI operation; low pressure hydraulic cylinders, 1½" to 6" bores for 500 PSI operation, 8" to 14" bores for 250 PSI; high pressure hydraulic cylinders, 1½" to 12" bores, 2000-3000 PSI operation. All mounting styles available.

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MILLER MOTOR COMPANY

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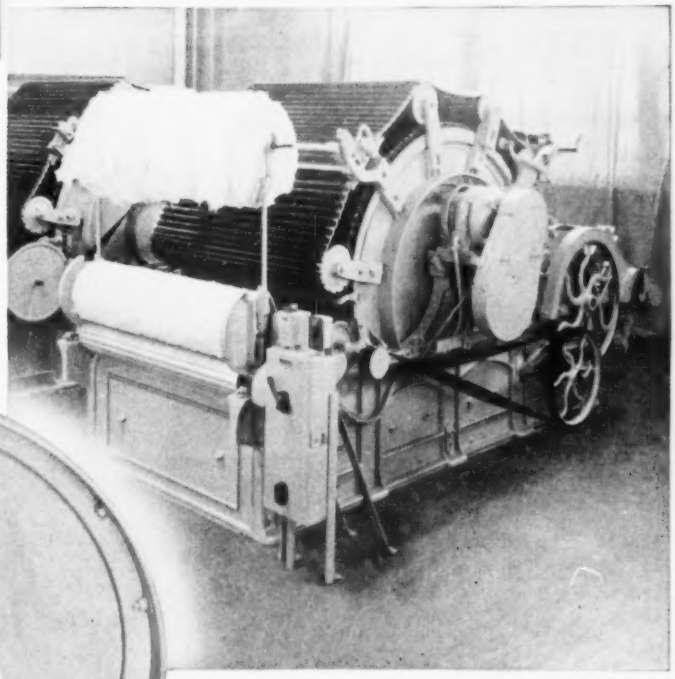
AIR & HYDRAULIC CYLINDERS • BOOSTERS • ACCUMULATORS
COUNTERBALANCE CYLINDERS

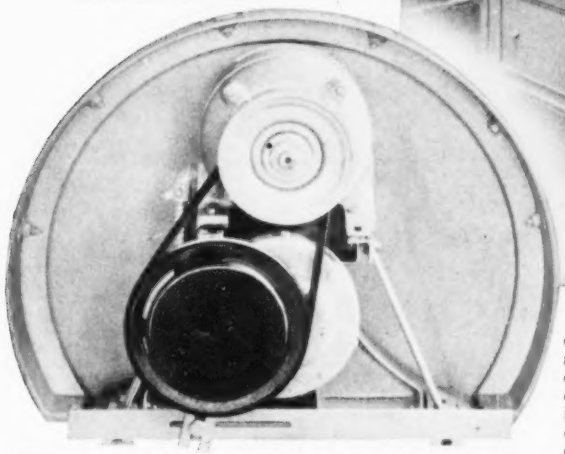
Improve Quality . . . Boost Production . . . Slash Costs with

AMERICAN

Individual Cotton Card Drives

Economical! Compact! Efficient!





These new, modern card drives give textile mills all the advantages of improved quality, increased production and reduced cost demanded by today's market. They make possible more efficient plant layout, better lighting, improved air conditioning and better all-around plant "housekeeping"—factors important in meeting current quality, production and cost standards.

Improved quality and increased production are made possible because these drives eliminate line shafting and permit a 20% variation in speed for each individual card. The elimination of line shafting and its attendant oil drip allows for better lighting and duct-type ventilation. Through the variable-speed feature, each card can be set at the precise speed for best quality at maximum production regardless of the fibres being processed.

First cost is low because the drives are simple, consisting of a single-reduction helical-gear unit, an adjustable-speed V-belt drive and a unique centrifugal clutch, all driven by a standard motor with standard controls. The entire drive is easy and inexpensive to install. The reduction unit mounts directly on the card cylinder shaft and the motor support is bolted to the card pedestal bearing. The entire drive nests compactly in the card arch with no floor obstructions and ample aisle clearance because the complete drive extends only $3\frac{1}{4}$" beyond the end of the shaft.

Get all the facts on the quality, production and cost advantages these modern Individual Card Drives offer. Write to American Pulley Company, 4232 Wissahickon Avenue, Philadelphia 26, Pennsylvania.

When Conditions Vary Widely,

as in spinning frame drives, the answer to speed-control problems is best met with American Wide-Range Adjustable-Speed Drives. Speed variations up to two-to-one can be obtained quickly and easily. Wide-Range Drives are made in six sizes, in two and three groove construction to suit requirements up to 20 HP.

Other products

Speed Reducers
Adjustable-Speed Sheaves
Solid and Split Shaft Collars
Steel Split Pulleys
Econ-O-Matic Motor Bases
Multiple-Groove Wedg-Tite Sheaves
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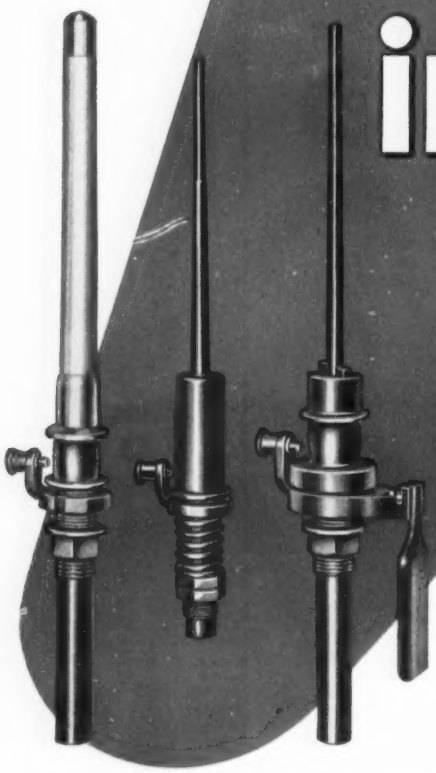
ROLLER BEARING SPINDLES

with FULL-FLOATING FOOTSTEP BEARING

Millions in Use



Marquette Spindles offer you low initial cost, low maintenance cost and efficient operation at high speeds.

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News in Brief

Puff! And Filling Grate is Clean. One southern mill is experimenting with a jet air cleaner in the filling grate on the loom to prevent accumulation of lint therein, often the cause of defects in weaving. The jet of air is supplied from a small pump operated by movement of sword. Although too early for a conclusive report, the jet appears to clean the grate satisfactorily, thereby relieving weavers or special men of this cleaning job.

Dollar Exchange and Foreign Trade. American producers of manufactured goods and agricultural products are finding that the chief barriers to export trade do not arise from any general scarcity of dollar exchange but are due instead to trade and exchange policies of other countries motivated by purposes apart from the balancing of international payments. This situation is brought out in a study by Dr. Claudius T. Murchison, of Washington, D. C., economic advisor to the American Cotton Manufacturers Institute. The study is titled "World Trade and the United States," and is published in booklet form.

What Happens to Tax Dollars. At last, states and communities are going to find out what happens to the dollars that they send to Washington to have returned to them in the form of federal grants-in-aid. A Commission on Intergovernmental Relations is being created, by act of Congress, to study the whole broad field of federal-state operations. The Commission will report to Congress next March.

Growing Markets for Wool. Increases in population make development of new fibers a necessity to meet world's rising textile requirements, according to a brochure "Wool in a Dynamic Economy," issued by The Wool Bureau. The position of wool as an essential component of the U. S. textile economy is outlined in the brochure. Increasing population and fast-developing new markets, together with a continually rising standard of living, mean that demand for wool will continue to equal or exceed production, the Bureau states.

12 Denier Nylons Second. Since February, American women have bought over 35,000,000 pairs of 12 denier nylon stockings. Of the seven weights or deniers now offered in the hosiery field, this newcomer has in four months' time become the second in importance.

Engineer Shortage Campaign Progress. Recent campaigns to reduce the nation's critical shortage of engineers are starting to pay off. The Westinghouse Electric Corporation's school service department recently reported that it is "heartening to note a 29 per cent increase in the number of college and university freshmen who enrolled in engineering courses in 1952."

Largest Compressive Shrinking Machine. The world's largest machine for shrinking cotton fabrics has been installed by J. P. Stevens & Co., Inc., at Clemson, S. C., coincident with the company's entry into the fitted sheet field. The new 120-inch-wide machine is wide enough to shrink fabrics upwards of 100 inches in width and is licensed under Cluett, Peabody patents. Eighty inches has been

Finest Glass Fabric

Production of the finest Fiberglas cloth ever woven in this country has been announced by Soule Mill, New Bedford, Mass.

The cloth, which measures .001 inches in thickness and weighs .81 ounces per square yard, is made possible by using Fiberglas yarns finer than any ever before produced. Commercial production of this fabric is the culmination of a year's joint research by Soule and Owens-Corning Fiberglas Corp.

Principal significance of the cloth, according to Marvin W. Butler, sales manager of Soule Mill's Industrial Fabrics Division in New York, is its applications in the electrical apparatus industry where, as the carrying medium for mica and insulating varnishes, it will permit design engineers to further reduce space factor requirements.

In spite of its sheerness—20 yards of fabric 36 inches wide are woven from one pound of glass yarn—the cloth is said to be remarkably strong.

Severe Conditioning Treatment

These bobbins can take it!

A. P. T. impregnated loom bobbins do not soften, warp or distort under severe conditioning treatment.

American Paper Tube Co.

ESTABLISHED 1898
WOONSOCKET, R. I.
GREENVILLE S. C.

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PROPERTIES OF A.P.T. ALL-PURPOSE BOBBINS

Incorporated in A.P.T. laminated-impregnated bobbins are all of the characteristics of: ideal yarn retention and delivery, crush-resistance, heat- and moisture-resistance needed for the varying requirements of HARD-TWIST NYLON, SOFT-TWIST YARNS, LOW-TWIST ACETATE, CONDITIONING TREATMENT

55 YEARS OF RESPONSIBILITY FOR EFFICIENT AND ECONOMICAL CARRIER SERVICE

the maximum practical width of compressive shrinking machines because the intake roll can be supported only at the two ends. At greater widths there occurred deflections of the roll which resulted in differences in the amount of compressive shrinking action, and the character of the fabric finish. Under recent Cluett, Peabody patents, the limitation on width has been overcome by mounting the roll on two sets of bearings at each end, which can be adjusted to counteract deflection.

"Imported" Label Disillusions! The gamble upon an "Imported" label only, without knowledge of the manufacturer, the quality of his product, or the opportunity to seek adjustment for inferior goods, is proving a poor one to many Canadian consumers, according to Arthur Mills, Toronto textile executive.

Mais Ouil The waist of the average French woman, during the past 25 years has increased by slightly more than one inch, stated the president of the International Museum Association upon opening the exhibition of "Fifty Years of Women's Clothing" in the Paris sales house, Le Printemps.

Time and Motion Clinic. The seventeenth annual Time and Motion Study and Management Clinic, sponsored by the Industrial Management Society, will be held November 4-6, 1953, at the Sheraton Hotel, Chicago.

Survey of Fibers at NYU. A comprehensive survey of modern fibers such as Orlon, dynel, Dacron, Acrilan, Fiberglas, nylon, and Vicara will be given in a fall course to be offered by New York University's Division of General Education. The adult evening study course is to be conducted from 8:10 to 9:55 pm on Mondays, September 28 to December 14.

Textileather Introduces Fabric. A rayon based material called "Toloron Straw," made in seven colors, is the first plastic coated fabric to be introduced by Textileather Corporation using this type of base. The Toloron pattern has the appearance of woven straw and is available in 26-ounce

Nylon Batting for Interlining

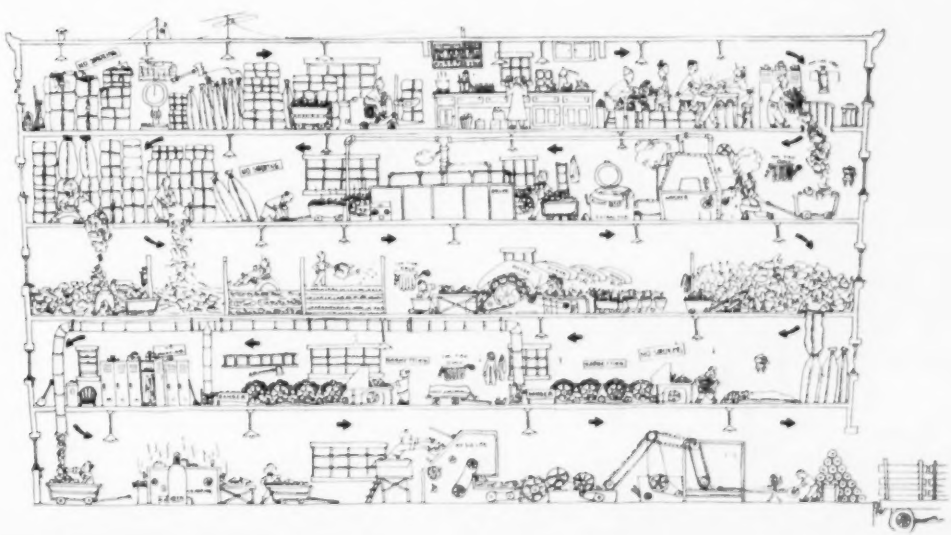
The fashion world got its first look recently at new fall and winter men's, women's, and children's wear incorporating Ny-Sul-Lite, a crimped nylon interlining. A product of Star Woolen Company of Cohoes, New York, Ny-Sul-Lite is claimed to be the only interlining with permanent crimping to insure perfect insulation.

Ny-Sul-Lite's special advantages, according to company spokesmen are: washes easily, dries quickly, greater warmth with less weight, mothproof, non-allergic, non-matting, will not creep, perfect insulation, dry-cleanable. It is available in a wide range of weights and sizes and is used for sportswear, snowsuits, lingerie, quilted garments, bedspreads, draperies, and shoulder pads.

Products containing Ny-Sul-Lite will bear a distinctive hang-tag that will be backed up by extensive promotions.

Ny-Sul-Lite is manufactured at Star by picking nylon stock, garnetting, and crimping the garnett web in a special thermosetting process. The crimped fibers are then run through machines which sandwich the webs in layers. Weights vary from 3½ to 16 ounces; widths from 38 to 94 inches.

A cartoonist's conception of the manufacturing process used in the production of Ny-Sul-Lite is reproduced below.



Important!
to purchasing agents
& weave room operators

PRECISION® LOOM BOBBINS

can be made ONLY by

New England Bobbin & Shuttle Co.

Nashua, New Hampshire

"PRECISION"

is OUR name

"Precision" is a word sometimes carelessly used. But to us at NEB it means just what it should:

Precision in careful selection of stock

Only the best part of straight-grained, solid, healthy hardwood is used for Precision® Loom Bobbins. The rest is discarded and burned.

Precision in manufacture

Modern machinery — some of it our own exclusive design; trained, experienced operators; all working at one job — to make the best possible bobbins. And six generations of bobbin-making have, we think, taught us a lot about making really GOOD bobbins!

Precision in finish

We guarantee NEB's Long-Life, all-over lacquer finish to be uniform, clear, smooth; to contain no brush hairs; to provide maximum resistance to moisture swell, even in bobbin bore.

Precision in inspection

NEB's are inspected — each and every bobbin — at six stages of manufacture. ALL bobbins not meeting NEB standards (which are high), are destroyed. NO ONE buys "seconds" of NEB, knowingly or otherwise.

Reg. U.S. Pat. Off

Write us for samples. Give us exact size or better yet send us a perfect spindle. We'll send you a generous number of Precision Bobbins.

PRECISION® N·E·B BOBBINS

FOR SILKS AND SYNTHETICS
COTTON AND SPUN RAYON
WOOLENS AND WORSTEDS

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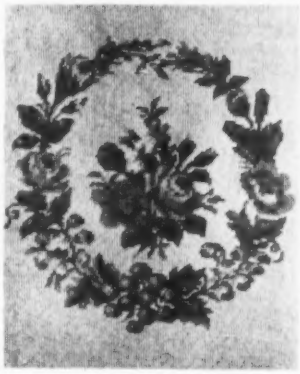
Appearance of Needle Point "Captured" in Flexible Plastic

The authentic appearance, texture, and color of needle point has been "captured" in flexible plastic, according to Edward Walton, president of the Forrest Process & Development Corp., 320 Fifth Avenue, New York, N. Y.

Designs created for Forrest Process by the world-famous needle point authority, Mme. Ida Jolles, are the first patterns of this kind reproduced in plastic, he declared.

The development is made possible by a new multi-color printing process designed to meet requirements of needle point reproduction on synthetic resins, Walton said. The printing process, similar to the technique used in color photography, faithfully reproduces needle point's delicate colors.

Using the three-dimensional, deeply molded technique, Forrest already has reproduced two of Mme. Jolles' designs.



The first is a floral garland with center spray. The second pattern is a close, neat, overall floral motif.

The new patterns, featuring precision molding and infinite detail, are suitable for seats, chair backs, headboards, hassocks, mats, tablecloths, shoes, slippers, handbags, fancy boxes, and automobile seat covers.

weight and 54-inch widths.

Cotton Group Goal. Goal of the Committee on Cotton Packaging, a sub-committee of the National Cotton Council's Industry-wide Committee on Cotton Quality, is a bale: (1) giving better protection of lint against contamination; (2) rugged enough to withstand present day handling methods; (3) simple and easy to sample; (4) that is economical; and (5) that can be more efficiently handled, transported, stored, or shipped.

U. S. Textile Machinery Exports. U. S. textile and sewing machinery factory shipments for 1951 totalled $647,600,000. Of this figure, $142,000,000, or 22% of total factory shipments went to the export market, according to the Council for Technological Advancement.

Flammable Fabrics Act Signed. President Eisenhower has signed into law the "Flammable Fabrics Act" of 1953. This law becomes effective June 30, 1954, and was designed to prohibit the introduction or movement in interstate commerce of articles of apparel or fabrics "which are so highly flammable as to be dangerous when worn by individuals."

Polish Synthetic Fish Nets. Fishing nets made from Steelon synthetic fiber (nylon 6) are undergoing tests by Polish fishing boats off the coast of that country. According to reports from abroad, the new fiber was developed by the Polish Textile Institute, and it is made from phenol obtained from the distillation of peat.

On Rayon Serviceability. What the consumer can do to be sure he is getting serviceable rayon and acetate is the subject of an illustrated booklet, "American Standard L22—Your Key to Better Textiles." Every person connected with the industry, the booklet states, will benefit from the application of the specifications, through good will, reduction of complaints against the fabric, in knowing what cleaning and laundering techniques to use, and in superior performance of the articles purchased. Copies of the booklet are available from the American Standards Association, 70 East 45 Street, New York 17, N. Y., price 10 cents.

News in Brief

New Start on Old Job. There's no flavor of "Operation Dixie" in the new southern organizing setup announced recently. We're all sadder and wiser than we were in 1946; we know that hard work—basic educational work—is the only road to unionism in the south. —*Textile Labor.*

Mt. Hope Told to Rehire New England Operatives. NLRB has directed management of the Mt. Hope Finishing Co., Inc., Butner, N. C., to reinstate the 800 operatives made idle when the Mt. Hope Finishing Co. of North Dighton, Mass., shut down in Oct. 1951. The order made the company liable for pay lost by the employees and their moving expenses to the South, should they decide to go.

Waste Dealers Policy. The Textile Fibres Institute of the National Association of Waste Material Dealers, Inc., representing garnetters, has established the policy of not paying for or returning bags and bale covers, thereby following the pattern set by mills in not paying for or returning bags or bale covers. Numerous members of the Textile Fibres Institute already noted that their firms had adopted this plan.

British Dyestuffs Nationalized? The dyestuffs industry has been marked for possible nationalization by the British Labor Party's national executive committee, according to a statement of policy by the Labor Party.

Canadian Group to do Research. At a recent meeting at Ganonoque, Ontario, representatives of the six regional technical associations affiliated with the Textile Technical

SONOCO'S DYTEX® TUBE

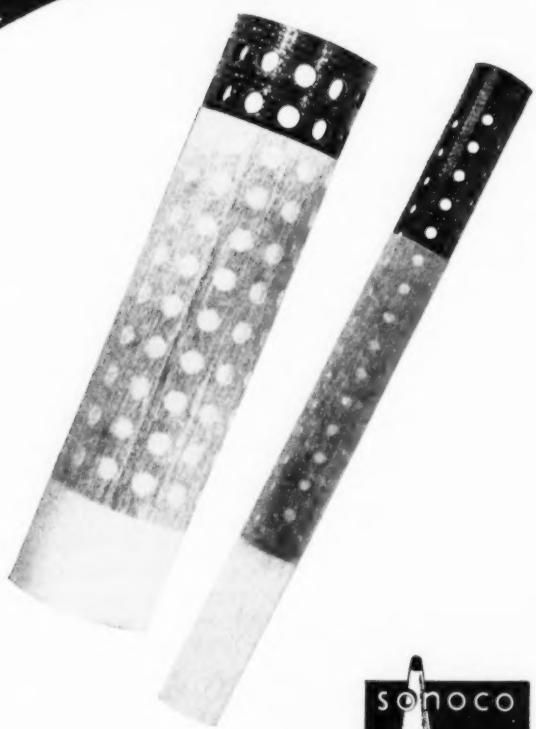
with PLASTAVON SLEEVE

. . . helps you–

DYE

√Cleaner

√Better



— and it's no accident! Here is a typical Sonoco product development—pre-tested, improved and tested again—and now industry-proven to be a superior filter for package dyeing. The DYTEX Tube, with exclusive Plastavon Sleeve, was designed to give you clean, even dye penetration and better control of "flow". Also reduces slippage in primary winding. Standard sizes ⅝" I.D. x 6¾" long and 1⅝" I.D. in varying lengths. Special sizes available. The ⅝" x 6¾" tube can be furnished in certain colors. Let DYTEX help you dye better!

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DEPENDABLE SOURCE OF SUPPLY

Federation of Canada, carried into its active stage a group study plan which will make available to all the members the results of study and research by the separate associations. The plan calls for study of a specific textile problem and for the preparation of a paper on that problem by the various associations. The National Council of the Federation is sponsoring a group study on Fastness Test Methods under the direction of C. V. Burnthall.

Silk Week. Members of the world silk industry participated in the Silk Week held in Rome and coinciding with the International Silk Congress.

Carpet Production. Production of wool and blended carpets and rugs for the first five months of this year was up 23 per cent over 1952, according to the Carpet Institute. A total of 32,733,000 square yards was produced during the five-month period of 1953.

Dynel Sales Up. Sales of Dynel for the quarter ending June 30 were up 74% over the first quarter of 1953 and more than double those of the corresponding second quarter a year ago, the Carbide and Carbon Chemical Company's Textile Fibers Department reported recently.

On Laundering. A complete guide to the laundering of both synthetic and natural fabrics, "Modern Fabrics and How to Launder Them," has been produced in booklet form and is being distributed by Whirlpool Corp., manufacturer of home laundry appliances.

New Bulgarian Mill. Plovdiv in Bulgaria is to have a completely new textile mill which will occupy 70,000 square meters. The new factory will manufacture women's stockings and warp knit tricot fabrics.

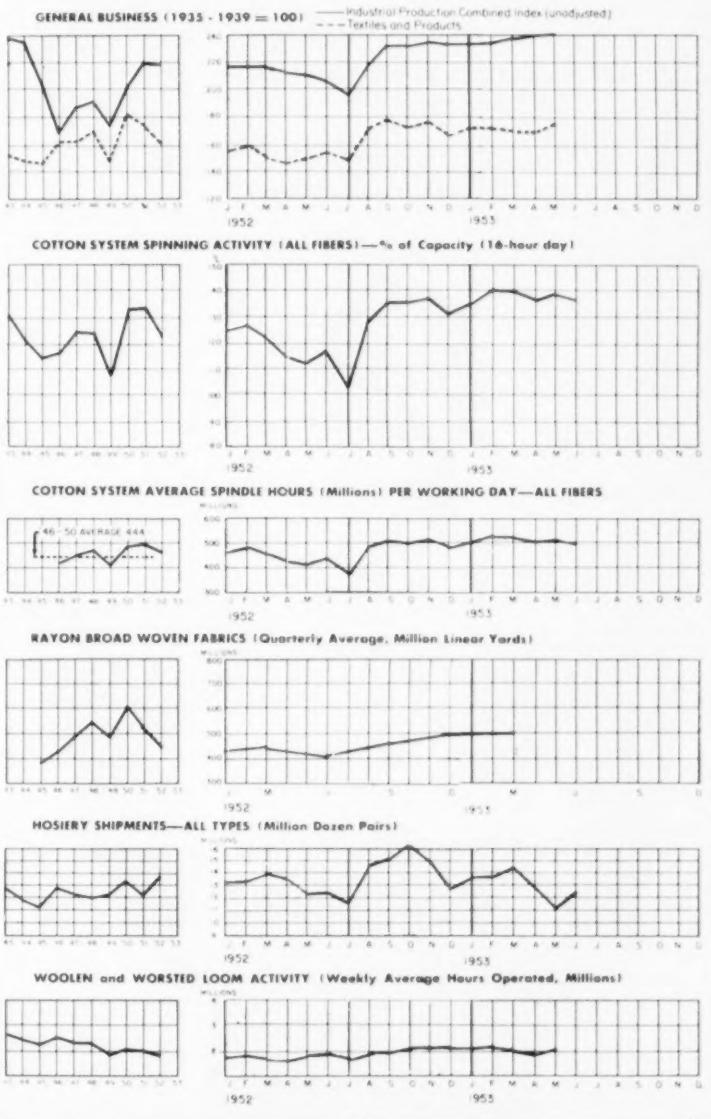
"Glass Textiles for Industry." American industry is currently using 60 different constructions of broad glass fabric in the production of a wide range of industrial and consumer products, according to "Glass Textiles for Industry," a pamphlet published by Hess, Goldsmith & Co., Inc., of New York, weavers of glass textiles. Copies of the pamphlet may be secured from the company at 1400 Broadway, New York 18, N. Y.

Wool Imports Study. The Tariff Commission has been ordered by President Eisenhower to investigate the effects of wool imports on the domestic wool price support program. The Secretary of Agriculture has been asked to supplement the investigation with a broader study of the domestic fac-

(Continued on page 202-A)

Textile Industry Activity Charts

Source of information: Bureau of the Census, U. S. Department of Commerce; National Association of Hosiery Manufacturers.



"Want to know why I always go to SOLVAY *FIRST* for these Textile Chemicals?...

. . . In a word—the answer is *service!* I mean sales service, delivery service, technical service.

Take delivery as an example. When I order textile processing chemicals from Solvay, I know I can depend on Solvay's efficient delivery service—from three convenient plants and over 200 stock points.

Occasionally, I run into a technical problem. Now here's where Solvay really shines, with an *exclusive textile* Technical Service that gives me the services of textile specialists—men who are experts in the textile business.

Yes, I have good reason for going to *Solvay first* for these textile processing chemicals."

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Allied Chemical & Dye Corporation
61 Broadway, New York 6, N. Y.

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Chlorine • Caustic Potash • Sodium Nitrite • Ammonium Bicarbonate
Cleaning Compounds • Sodium Bicarbonate • Snowflake® Crystals
Para-dichlorobenzene • Ortho-dichlorobenzene • Monochlorobenzene
Ammonium Chloride

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

The Third Shift (Con and Pro)

WE LISTENED to an interesting discussion the other day about the third shift, and when it was over we found ourselves just about as confused as we were when we started. The argument was between two mill men and it went something like this:

Against the third shift. The country cannot consume the production of three shifts. Foreign nations are more and more producing their own textiles, and what are we going to do with the excess? The over-production caused by the third shift gluts the market and starts a price decline. Buyers, seeing this decline, refrain from purchasing and wait for lower figures. This waiting causes a further decline, and all the time mills are operating around the clock, building up a bigger surplus of goods. Finally, when all of the water is wrung out of the rag and prices have hit the bottom of the well, buyers go back into the market, surpluses are gradually worked off, and prices begin to firm. Then the whole thing starts over again. The source of the trouble is over-production, and this is mainly caused by third shift operations.

For the third shift. In a highly competitive industry such as textiles, low-cost operations are essential for survival. Production on a three-shift basis means that fixed overhead costs are spread over a larger poundage of yarn, or a larger yardage of cloth, and lower production costs result. If someone waved a magic wand and abolished all third shifts in textiles, there would still be the so-called problem of over-production, because during highly favorable market periods mills would expand their spinning rooms and their weave rooms, new mills would be built and more foreign goods would be brought into the United States. It may seem hard but, in the end, there is going to be a sort of "survival of the fittest" and the survivors are going to be those mills which are closely knit, compact organizations running three shifts of highly efficient, modern machinery.

We became so interested in the argument that we looked up some figures to see what had been happening on this third-shift proposition, and we found that there has been a growing tendency toward the third shift. For instance, in January 1947 only 37% of first shift looms were operating on the third shift. By January of 1953, however, this had risen to 85%. This was no flash-in-the-pan operation, either, because only in one month, December 1952, has this percentage gone above 85. There has been a gradual rise over this entire period, apparently caused by the need on the part of more and more mills to reduce their costs as far as possible.

Another side light, and we think an interesting one, on this whole picture are the figures we quoted in this column last month with regard to decline in number of active spindles over the past several years. For the past twenty-seven years, we have lost an average of more than 500,000 spindles a year. To us this sounds very much like a race for the survival of the fittest. There is no indication when or where this race will stop.

Is the third shift the shining hope of the American textile industry? Is it the villian which must be stamped out at any cost? What do you think?

Where Are Exports?

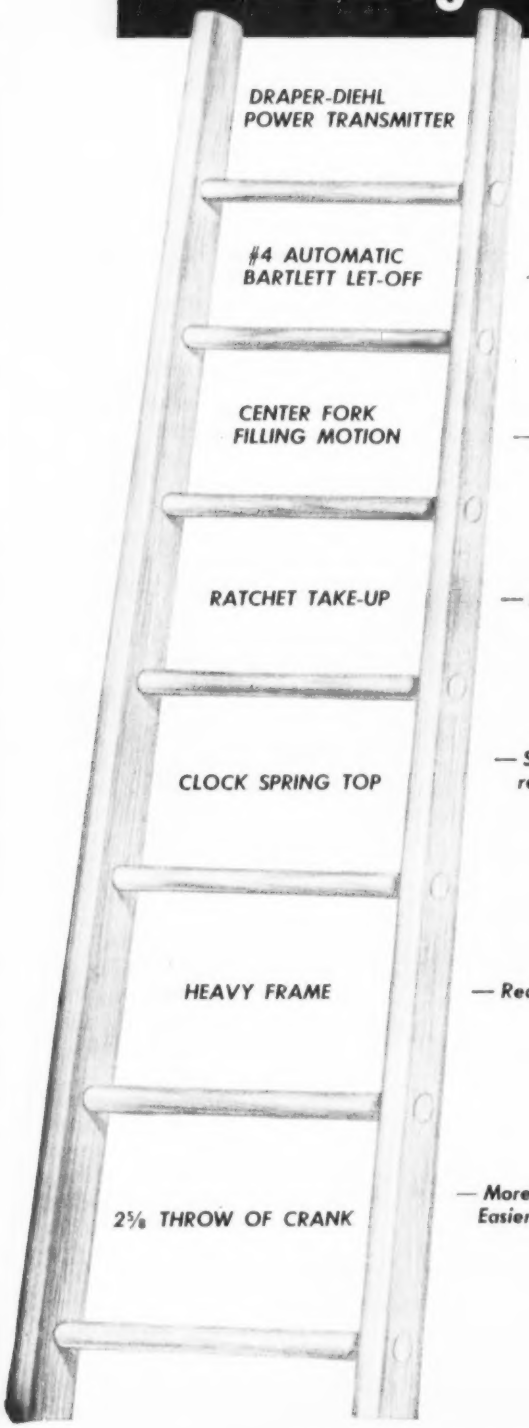
Several times in recent months we have had something to say about foreign trade in textiles. It was with more than passing interest, therefore, that we noted the remarks made several weeks ago by Matthew J. Cuffe, president of the Textile Export Association of the United States. Mr. Cuffe's address was on the occasion of the Association's annual meeting.

He pointed out that during 1952 the American textile industry surprised the entire world by rising to the top position among exporting nations. On the other hand, he prophesied that 1953 would see no such record because both the United Kingdom and Japan have already moved ahead of the United States, and India is running strong in fourth place. He stated that practically all of our natural markets are buying less from us than at any time since 1946 and that the only exception is Canada.

We were especially interested in Mr. Cuffe's prediction that American exports of cotton cloth in 1953 might fall as low as 550,000,000 square yards. We checked back on cotton textile exports for a number of years and found that if Mr. Cuffe's dire predictions are realized, our 1953 exports will be the lowest since 1943. On the other hand, in the last half of the 1930's our cotton textile exports ranged from 185,000,000 square yards to a

Climb to Success...

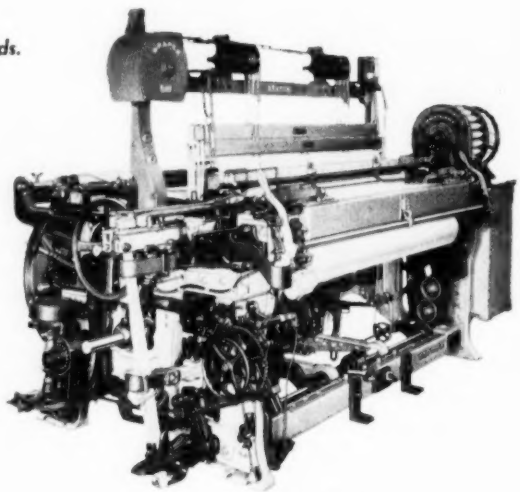
weaving QUALITY COTTONS



on

DRAPER

X-2



DRAPER CORPORATION

HOPEDALE, MASS.

SPARTANBURG, S.C. ATLANTA, GA.

high of 367,000,000 square yards, and by this measure 1953 exports of 550,000,000 square yards might not look too bad.

On the subject of trade agreements with other countries, Mr. Cuffe's sentiments were similar to our own. "We have already given enough," he said. "It's about time that we get something in return." He could not have summarized the foreign trade situation any more clearly nor any more concisely. We hope that his words will be heard in Washington.

Cuban Problem

One very important phase of the foreign trade muddle is the controversy between the United States and Cuba. Cuba, with a very small textile industry, some years ago embarked on a course of keeping U. S. textiles off the Island, and this effort has been most successful. At one time in first place as a Latin-American market for United States textiles, tariff walls have now dropped it to third place.

One important aspect of the Cuban tariff problem has been the growth of smuggling. Just as the care and preservation of tourists has been, and is, the leading business in Florida, so has textile smuggling become the leading business in Cuba. This may be somewhat of an exaggeration, but the very wide disparity in figures showing the number of yards of cloth leaving American ports destined for Cuba and the number of yards of such cloth which finally clear through Cuban Customs, shows that smuggling must, indeed, be an important profession in the Island Republic.

With an important meeting of the signatories to GATT—General Agreement on Trade and Tariffs—scheduled for Geneva, Switzerland, September 17 through October 30, it appears likely that there may be a further airing of the Cuban textile tariff situation. Those who are well informed on the situation in Cuba point out that the difficulty we are experiencing in selling textiles to Cuba is closely tied in with the Cuban sugar problem. If the United States will take sugar, then Cuba will take textiles.

Government Contracts

Ever since 1936, when the Public Contracts (Walsh-Healey) Act was passed, it has been an almost impossible task to determine whether or not a mill which is not a primary contractor, but which sells component parts to a primary contractor, is or is not covered by the law. The difficult part of this problem has been that all such de-

(Continued on page 203)

Sept. 10-11—Fall meeting, The Fiber Society, Lowell, Mass.

Sept. 17-19—Annual national convention, American Association of Textile Chemists and Colorists, Conrad Hilton Hotel, Chicago, Ill.

Sept. 19—Fall meeting, Northern North Carolina-Virginia Div., STA, Hylton Hall (Dan River Mills), Danville, Va.

Sept. 24-25—Joint annual meeting, National Association of Cotton Manufacturers and Northern Textile Association, Wentworth-By-The-Sea, Portsmouth, N. H.

Oct. 3—Fall meeting, Alabama Textile Operating Executives, Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala. Discussion on carding and spinning problems.

Oct. 9—Fall meeting, Carolinas Section of the American Society for Quality Control, School of Textiles, N. C. State College, Raleigh, N. C.

Oct. 14-22—"Textile Recorder" International Exhibition of Textile Machinery and Accessories, Belle Vue, Manchester, England.

Oct. 15-16—47th annual meeting North Carolina Textile Manufacturers' Association, Carolina Hotel, Pinehurst, N. C.

Oct. 19-23—41st National Safety Congress and Exposition, Chicago, Ill. Sessions on industrial safety will be held in Conrad Hilton, Congress, Morrison, and Hamilton Hotels.

Oct. 20-22—Industrial Packaging and Materials Handling Exposition, Boston (Mass.) Mechanics Building.

Oct. 29-30—Annual convention, Carded Yarn Association, Grove Park Inn, Asheville, N. C.

Oct. 29-30—AIEE Textile Industry Conference on Electrical Equipment, North Carolina State College, Raleigh, N. C.

Nov. 4-6—17th annual Time and Motion Study and Management Clinic, sponsored by Industrial Management Society, Sheraton Hotel, Chicago, Ill.

Nov. 9-12—8th Refrigeration & Air Conditioning Exposition, Public Auditorium, Cleveland, Ohio.

Nov. 12-13—Annual meeting, Textile Research Institute, Commodore Hotel, New York, N. Y.

Nov. 30-Dec. 5—24th Exposition of Chemical Industries, Commercial Museum and Convention Hall, Philadelphia, Pa.

1954

Feb. 4-6—Technical meeting, Textile Div., American Society for Quality Control, School of Textiles, N. C. State College, Raleigh, N. C.

Feb. 25-27—Annual convention, Phi Psi national honorary textile fraternity, Carolina Hotel, Pinehurst, N. C.

Mar. 18-20—Annual meeting, Alabama Cotton Manufacturers Association, Hotel Buena Vista, Biloxi, Miss.

April 7-10—Annual convention, Cotton Manufacturers Association of Georgia, Boca Raton (Fla.) Hotel and Club.

April 22-24—Annual convention, American Cotton Manufacturers Institute, Jung Hotel, New Orleans, La.

April 26-30—American Textile Machinery Exhibition (sponsored by American Textile Machinery Association), Atlantic City (N. J.) Auditorium.

June 10-12—Annual meeting, Southern Textile Association, Ocean Forest Hotel, Myrtle Beach, S. C.

Oct. 4-9—18th Southern Textile Exposition, Textile Hall, Greenville, S. C.

Only SEALMASTER Gives You Positive Locking Plus Easy Shaft Mounting

SEALMASTER BEARINGS now provide the first practical answer to positive shaft locking with easy shaft mounting. Just slip the bearing onto the shaft . . . tighten two set screws . . . that's all. This is made possible through ZONE HARDENING.*

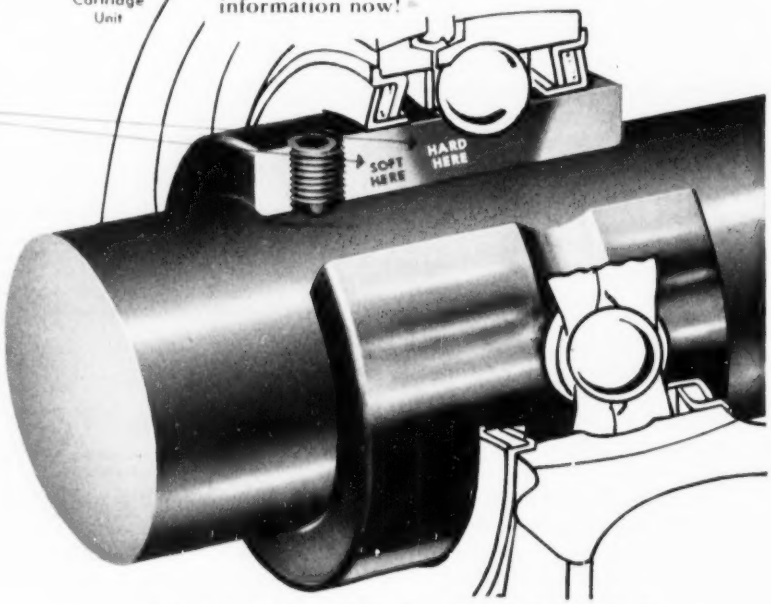
SEALMASTER BALL BEARING UNITS

Cartridge Unit | Flange Unit | Take-Up Unit | Flange-Cartridge Unit

With Zone Hardening, the inner race of the bearing is hardened through the ball path section only. The rest of the race is left in its original, metallurgically soft state. The threads of the hardened set-screws bind firmly in this softer portion of the race and cannot work loose. This insures positive race-to-shaft locking for the life of the bearing.

In the machines you design, build or use, SEALMASTER Zone Hardening means better bearing performance, less maintenance and replacement costs. Write for full information now!

*ZONE HARDENING is a completely automatic heat treating process with timing controlled *to the tenth of a second*. In addition to enabling positive race-to-shaft locking, it provides a finer grained, metallurgical structure of uniform hardness in the ball path section. This gives better load carrying ability. Zone Hardening is patented . . . only SEALMASTERS have it.



SEALMASTER BEARINGS

A DIVISION OF STEPHENS-ADAMSON MFG. COMPANY

74 RIDGEWAY AVENUE, AURORA, ILLINOIS

FACTORY REPRESENTATIVES AND DEALERS IN ALL PRINCIPAL CITIES

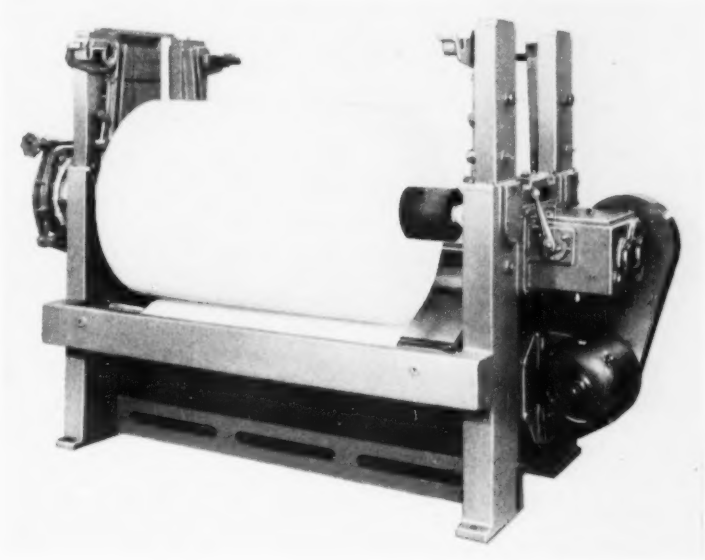
NEW Equipment AND MATERIALS

Jig Type Dyeing Machine for All Kinds of Fabrics

An American-made jig type dyeing machine featuring relatively constant cloth speed and controlled constant tension can be used for all types of fabrics from very sheer goods to heavy duck and similar materials. It is called the "Dyemaster" jig.

Stopping, starting, reversing and number of passages of the fabric through the dye bath can be pre-set and automatically controlled, assuring the greatest uniformity in dyeing. Thirty-four inch batch rolls permit high production from this jig.

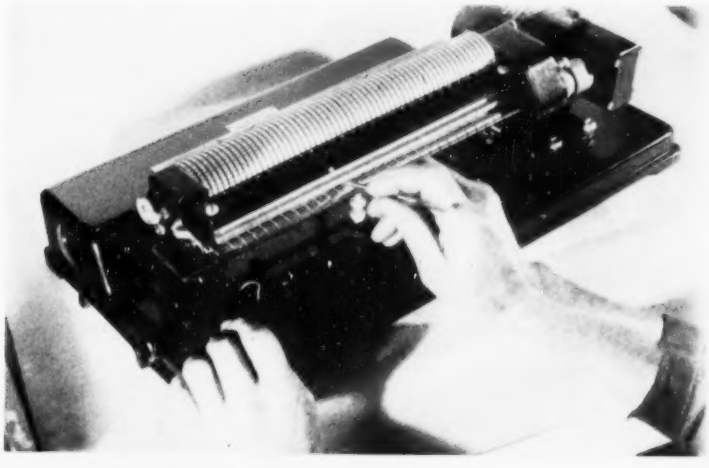
Other features of the machine are tension controlled loading and unloading by an exclusive mechanical arrangement; hydraulically damped oscillating expander arrangement; a new main drive gear box using bevel gears mounted on anti-friction bearings and running in oil for the highest efficiency. Also, heavy box section side frames with cast girts contribute to the exceptionally quiet and vibrationless operation. This machine is available with or without enclosure.



Van Vlaanderen Machine Co., 370 Straight St., Paterson 3, N. J.

For additional data, request item I-203, using Handy Return Card on page 212.

Fiber Length Measuring and Counting Machine

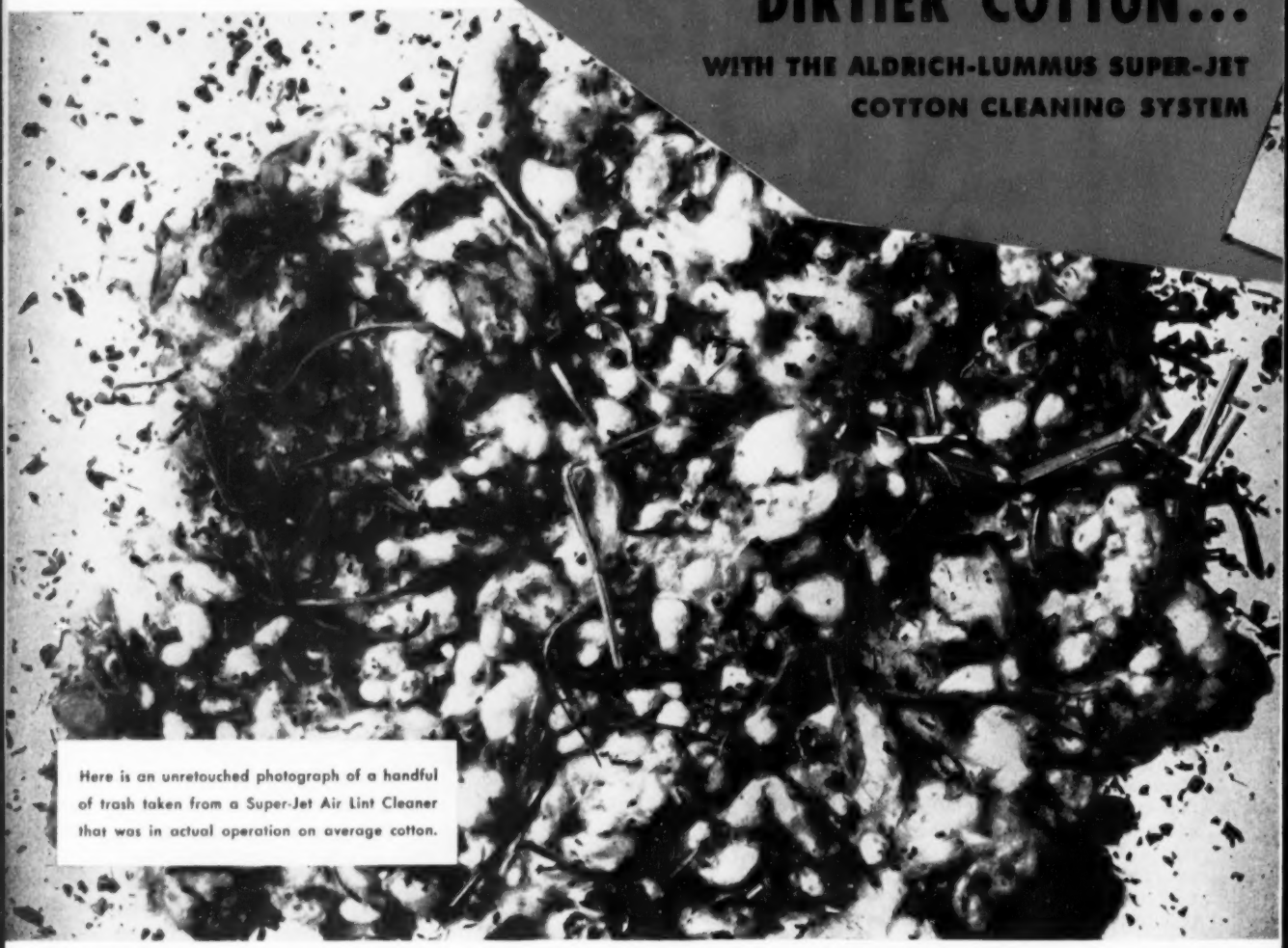


A machine developed by the Wool Industries Research Association in England for the semi-automatic measurement and recording of the lengths of single fibers of wool, rayon, etc., is now available through a source in the United States. It measures fibers up to 30 cm in length in steps of ½ cm.

Special forceps furnished with the machine are utilized by the operator to draw fibers one at a time from the sample to be analyzed. The fiber is gripped at its end by the forceps, the points of which are in turn engaged in the groove of the motor-driven lead screw extending the entire length of the front of the machine. At the same time he presses

CLEANER YARN *from* DIRTIER COTTON...

WITH THE ALDRICH-LUMMUS SUPER-JET COTTON CLEANING SYSTEM



Here is an unretouched photograph of a handful of trash taken from a Super-Jet Air Lint Cleaner that was in actual operation on average cotton.

Much of the higher graded cotton today has been heavily machined at the gin to take out the *visible* trash which affects the grade. Such *apparently* clean cotton has a very high nep count in the bale, and yarn made from this cotton will be neppy • The Super-Jet Cleaning System does not make neps, and fully cleaned cotton will have the same, or very nearly the same, nep count as it had in the bale • Therefore cotton with a low nep count, even if trashy, can be cleaned with the Super-Jet System to make yarn with few neps • Also, Super-Jet Cleaning is done entirely with air, and big trash is not broken into fine specks.

ALDRICH-LUMMUS CLEANING SYSTEM

Made by LUMMUS COTTON GIN CO. Columbus, Ga. and ALDRICH MACHINE WORKS Greenwood, S. C.

Sold and Installed by ALDRICH MACHINE WORKS Greenwood, South Carolina

the forceps lightly against a fixed fence extending the length of the screw.

The rotating screw moves the forceps and the single fiber along its length. When the end of the fiber passes through a lightly loaded jaw, a sensitive trip arrangement stops the rotation of the lead screw. The forceps are then at a distance along the screw which is the length of the fiber.

Examination of the counter following measurement of all the individual fibers in a sample shows immediately the number of fibers of each length category in the sample.

Stellite American Corp., 60 East 42nd St., New York 17, N. Y.

For additional data, request item I-202, using Handy Return Card on page 212.

NEW Equipment AND MATERIALS

Twister Spindle Bearings Need No Attention for Five Years

Several maintenance-reducing features are offered by a new twister spindle with pre-packed ball bearings:

(1) Bearings require no attention for an estimated five years. Oiling is eliminated with the result that frames stay cleaner and yarn is not contaminated with oil.

(2) Anti-friction bearings enable smoother operation at high speeds; also more even yarn twist. Rubber mountings for both bearings aid smoothness.

(3) A double eccentric aligning device in the base facilitates plumbing of spindle. Adjustments can be made while spindle is running.

(4) A height adjustment for the bobbin is provided if desired; adjusting collars permit raising or lowering the bobbin seat.

(5) An improved brake with larger

(Continued on page 213)

Hartford Machine Screw Co.'s new twister spindle.

Tricot Sample Knitter Saves Yarn and Time

A three-bar, 21-inch tricot sample knitting machine, called the Gibbs Sample Knitter, will save yarn and time for mills that have been running samples on production model machines. Needle bars can be furnished in any gauge desired, to accommodate either leaded or butted type needles.

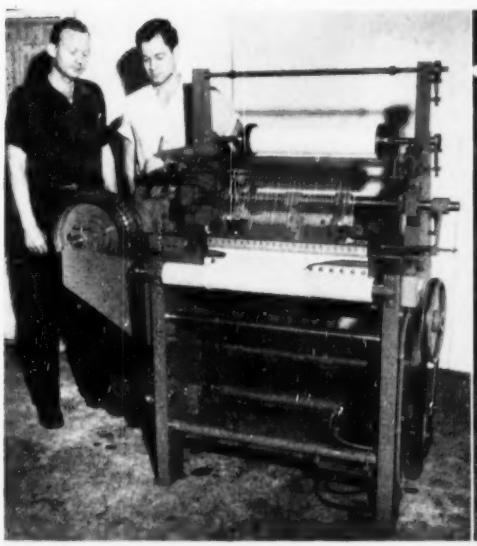
The pattern chain wheel may be run with the use of pattern links, also obtainable on order. These are of conventional type, being interchangeable with some other makes. These, plus the equipment for warping the spools, are furnished as optional equipment.

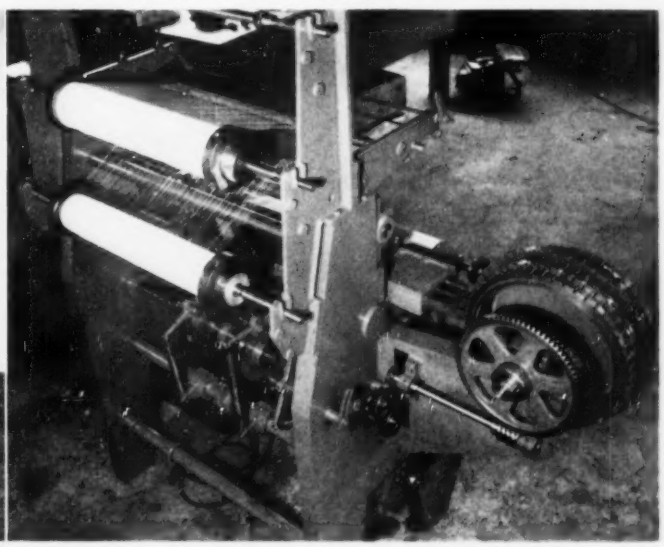
Other features of the sample knitter are: positive take-up, warps easily accessible, fast change of ratios, split type main cams, and in-line push bar assembly.

Gibbs Machine Co., 1023 West Lee St., Greensboro, N. C.

For additional data, request item I-209, using Handy Return Card on page 212.

Front and rear views of the Gibbs Sample Knitter are shown in the left and right photos, respectively.





STRENGTH WHEN YOU NEED IT . . .

Strength is an integral part of every Textile Needle. Strength insured through special steels, formulated for Textile — through precision manufacturing — through electronic testing.

Carefully packaged to protect their quality, Textile Needles give you finer knitting, better fabrics, for extra profit dollars.

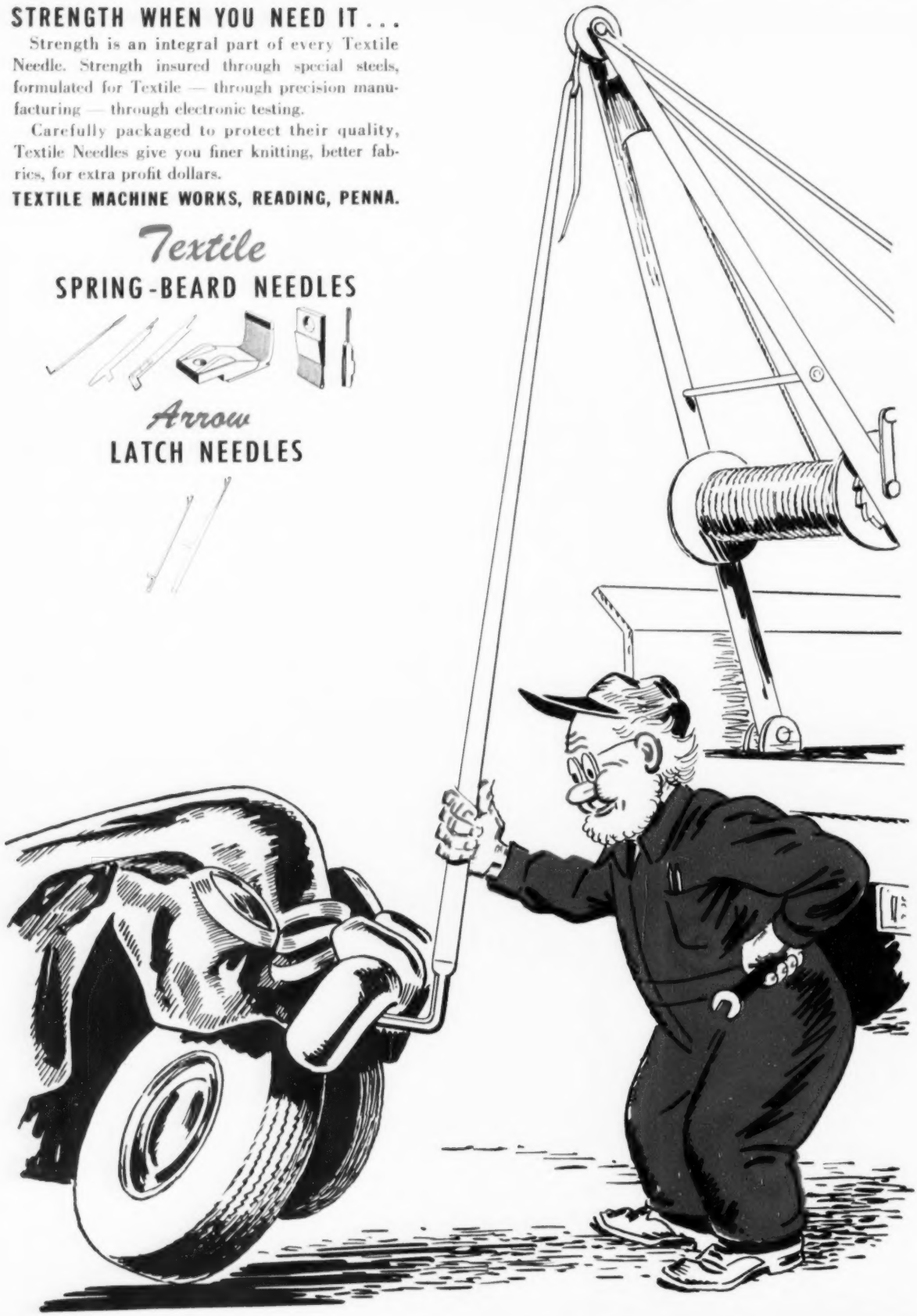
TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

Arrow

LATCH NEEDLES



Want a Cleaner Mill?

Imagination and a little money can turn the trick

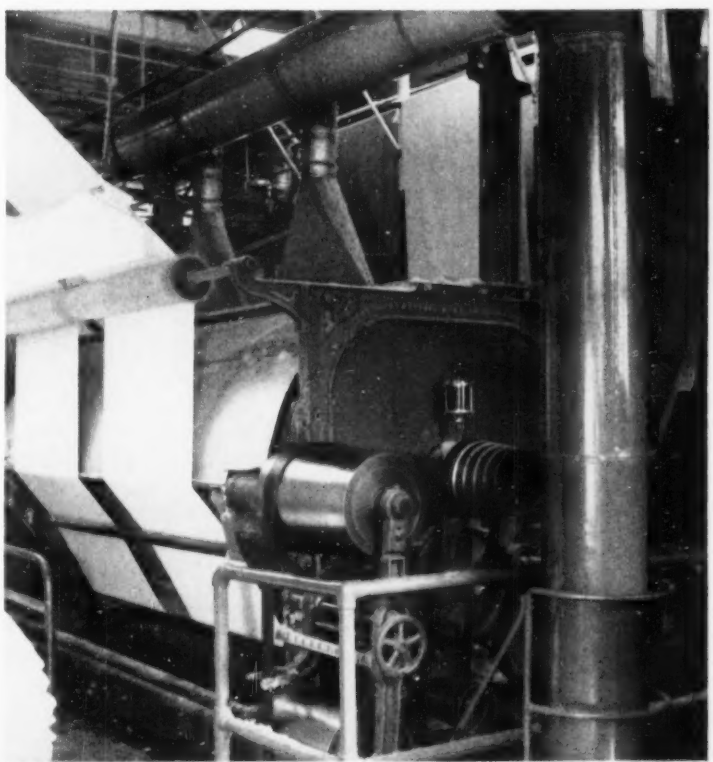
Staff Prepared
EXCLUSIVE

COVERS remove excessive lint from the atmosphere around planetary nappers in one large southern mill. In this mill the arrangement has been in service about 18-20 months, and a notable improvement in cleanliness is evident. Most of the lint appeared at the top of the napper, and the cleaning ducts were located at the bottom of the napper. Now the metal shrouds around most of each machine remove the lint through air pipes at both top and bottom of the napper cylinder.

Advantages are obvious in terms of cleanliness around the napper (see accompanying illustration). The only disadvantage noted is inaccessibility to clothing in case of damage or need for repairs; however, this is not considered objectionable in view of the tremendous improvement in operation as compared to the old arrangement.

Picker Room. Pans installed under picker hoppers serve to catch cotton which would otherwise fall on the floor (see accompanying illustration). Several years ago this mill started installing these pans because the bottom apron always drags a small amount of cotton around with it, and this cotton often fell on the floor, thereby presenting a bad appearance as well as permitting waste. The pans were installed primarily to improve cleanliness. The additions were needed on old-type hoppers, and the cost is estimated at $35.00 per hopper for the complete pan and installation. The pans were made of sheet metal in the mill shop and will eventually

(Continued at bottom of page 124)



Here's a way to publish a

Mill Newspaper on a Rock-Bottom Budget

WHAT do you think of a once-a-month employee publication with a circulation of 56,000, a readership estimated at 200,000, and an annual tab of only $5,000? Impossible? It's being done at F. C. Huyck & Sons, Rensselaer, N. Y.

Huyck's internal house organ, "News from Huyck's," resembles employee newspapers found in textile mills the country over. Its banner proclaims it to be "A Monthly Newspaper for the Employees of F. C. Huyck & Sons, Their Families, Friends, and Neighbors." It has an editor, volunteer reporters in each of the mill's departments, no skimping on illustrations which range from line cuts to half-tone engravings, a generous amount of type, and 4500 to 7000 words in each issue.

Paper Within Paper. Here's the one BIG difference. "News From Huyck's" is a newspaper within a newspaper. It is printed in one of the leading dailies of Albany, N. Y., "The Knickerbocker News." The plant publication appears as an 8-column spread, varying in

Staff Prepared
EXCLUSIVE

space from ½ to ¾ of a page, once monthly on the last Monday. The first issue appeared October 27, 1952, as an experiment. Volume 1, No. 1, made a hit as town comment and unsolicited letters clearly demonstrated, and it has continued uninterrupted since.

Typical regular features of this unique internal house organ are: an employee of the month column; a spotlight on one of the company's departments; idea bank news; union doings; personal notes; new employees welcome; anniversary and retirement mentions;bowling; general news; and a well-edited good will pitch about the company.

Walter (Ike) White, assistant industrial relations manager and editor-in-chief, believes that the Remington-Rand Company was the prime mover in this type of industrial and public relations. However, the operation fits neatly into Huyck's situation, and the idea was borrowed. Huyck has hundreds of pensioners living in the up-state New York region, having initiated retirement plans as early as 1911. Officials of this large papermakers' felt and blanket mill are anxious to keep alive the kindred spirit feeling with these older former employees. The best way to reach them was through a widely circulated daily newspaper.

Good Publicity. Also, it is no secret that Albany's labor market is extremely tight. Textile mills there must compete with high paying machine and chemical industries for a supply of wage earners. Good publicity in the local newspaper opens the way for effective recruiting. The paper tells of fringe benefits in an easy-to-digest way.

Then there is the future to think about — the thousands of youngsters in the region who will soon be wage earners and job hunters, making decisions where to work, perhaps to cast their lot elsewhere than in the textile plant. Good will, information, and edu-

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Want a Cleaner Mill? Imagination and a Little Money Can Turn Trick

(Continued from preceding page)
pay for themselves in labor savings (less cleaning) and waste savings; however, the pans were installed only for appearance and cleanliness.

Opener Room. Metal covers were installed in the opener room over old type feed hoppers, and filter bag ducts connect the hopper covers to dust extractors. Before these covers were installed, the opener room was extremely dusty. Now the dust extractors and hopper covers permit cleaner conditions and a more pleasant place in which to work. Although two lines of opener hoppers were operating in the room, note the absence of lint and dust in the accompanying illustration.

MORE PLEASANT WORKING CONDITIONS prevail in the opening room since feed hoppers have been covered and connected to dust extractors.

cation about Huyck's and the community spirit as pioneered in this newspaper help to win over these youths.

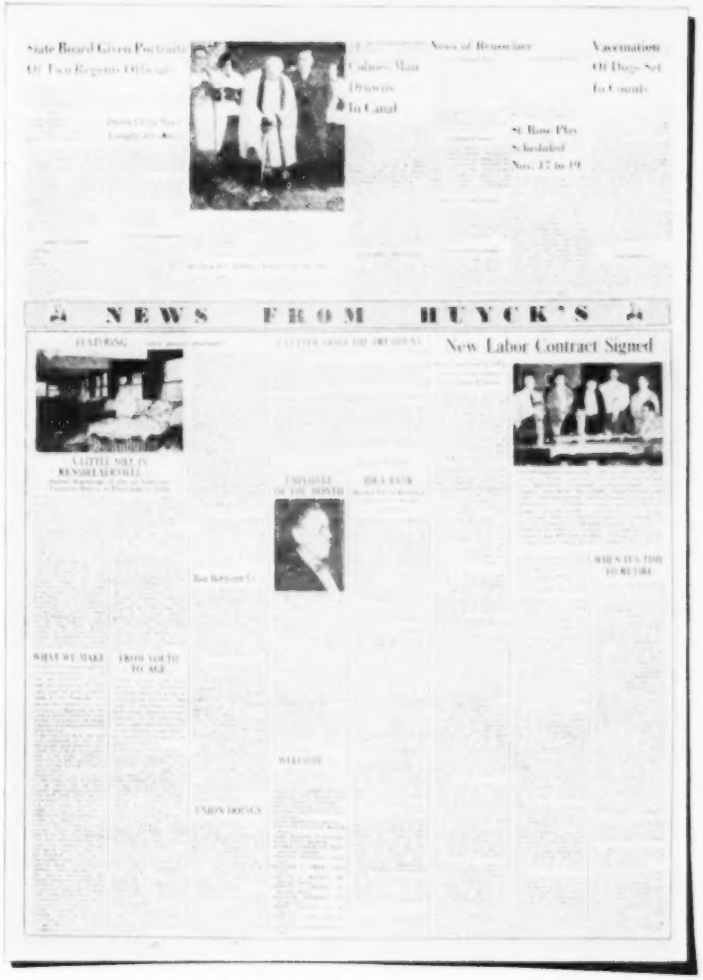
The mechanics of such a newspaper operation are simple, and in simplicity there is low cost. "The Knickerbocker News" accepts copy from Huyck as paid display advertisement at the regular rate. On occasion copy is rewritten by staffmen in journalese to conform with Knickerbocker's format. Layout is also handled by the staff. Photos, taken with a Land Polaroid camera (soon to be supplemented with a Speed Graphic) by a member of the industrial relations department, and other art work are sent into the newspaper at the same time as the copy, usually on the second Monday of the month.

By the end of the week, Editor White receives his revised copy, ok's it, and sends it back to the printshop. The following week Knickerbocker returns page proofs for ok and two days later the final plate is prepared.

Reprints for Employees. From this plate a local contracting printer runs off 1500 reprints at a charge of $30 per 1000. The plate is returned to Knickerbocker for the regular press runoff of the newspaper scheduled for the last Monday of the month. With the return of the plate, deposit for the metal is refunded. Reprints and the daily carrying the original appear on the streets at approximately the same time. The Knickerbocker News is sold at 1:30 pm, and the reprint is distributed at the gates to employees leaving at the 3:30 pm end of shift. About 100 copies of the reprint are mailed out to salesmen and company representatives elsewhere.

Only the Kenwood Division, the largest of Huyck's three mills, is serviced with "News From Huyck's." Different conditions in the other plants make it difficult to give blanket coverage.

Editor White estimates that a formal employee newspaper, published independently of the daily, would cost a minimum of $15,000. But even at this price, circulation would be limited to company personnel and the effort would be lost for nearly 200,000 readers.


NEWS FROM HUYCK'S

New Labor Contract Signed

"NEWS FROM HUYCK'S" is a newspaper within a newspaper. Printed in one of the leading dailies of Albany, N. Y., "The Knickerbocker News," the employee publication appears as an eight-column spread, varying in space from ½ to ¾ of a page, once monthly on the last Monday.

MAKING PLANS FOR THE FIRST ISSUE of "News from Huyck's" are (left to right): seated—Assistant Editor Melba Dings, Editor White, and Georgia S. Millea, all employees in the industrial relations department; standing—Wool Sorter Adam Gray, Idea Bank Manager Alfred Tanner, and Union Trustee Albert C. Ewasco.

MEASUREMENTS OF SELVAGE as recorded on the report, are made on Premier Selvage Tester (left). At first, inspectors (right) have trouble seeing imperfections in black heels placed over black examining forms, but soon they can reach normal production rates.

QUALITY CONTROL FORM used at Sumner Hosiery Mill. If the selvage difference on either leg or foot is greater than that allowed, corrective action is taken immediately.

NO. 8882

SUMNER HOSIERY MILL, Gastonia, N. C.

MEASURING REPORT

MACHINE NO. 6-McNabb DATE

STYLE 606-K-Brown SIZE 9

WALE NO.	LEG LONG SIDE: READ INCHES	LEG LONG SIDE: READ EIGHTS	SELVAGE DIFFERENCE: DIFF. IN EIGHTS	SELVAGE DIFFERENCE: SHORT SIDE	FOOT LONG SIDE: READ INCHES	FOOT LONG SIDE: READ EIGHTS	FOOT SELVAGE DIFFERENCE: DIFF. IN INCHES	FOOT SELVAGE DIFFERENCE: SHORT SIDE	CORRECTIVE ACTION TAKEN	FIRST CORRECTIVE READING: LENGTH	FIRST CORRECTIVE READING: DIFFERENCE	SECOND CORRECTIVE READING: LENGTH	SECOND CORRECTIVE READING: DIFFERENCE
1	31		1	R	9		2	L					
2	30	6	1	L	8	7	1	L					
3	31		2	L	9	2	1	L					
4	30	6	2	L	9	1	1	L					
5	30	6	1	L	9	2	1	L					
6	30	7	1	R	8	7	2	L					
7	30	5			8	6	1	R					
8 S.S.	30	6			8	7	1	R					
9	31		1	L	8	6	1	R					
10	30	7	1	L	9		1	L					
11	30		2	R	7	7	1	R					
12	30	6	2	L	9	3	1	L					
13	30				9								
14	30	7	2	L	8	5	1	L					
15	30	1	1	L	9		1	L					
16	30	3	1	L	8	5	1	L					
17	30	2	1	L	8	5	1	L					
18	30	4	1	L	8	5	1	L					
19	30	5	1	L	9		1	R					
20 S.S.	31	0	2	L	8	5	2	L	More tension left	8-7	1L		
21	30	7	1	R	9	2	1	L					
22	30	6	1	R	8	6	2	L	Switched yarn	8-6	1L		
23	30	1			9	1	2	L					
24	30	7	1	L	9		1	L					
25	30	4	3	R	9		2	L	More tension left	9-0	1R		
26	30	5	1	L	8	6	1	L					
27	30	6	2	L	8	6	1	L					
28 C.S.	29	6	1	L	8	4	1	R					
29	30	5	1	L	9	1	1	L					
30	30	3	1	L	9	6							
31	30	1	3	L	9		1	L					
32	30	1	3	L	8	7	1	L					
TOTALS	977	6	51		284	6							
AVERAGE	30	5/8	30		8	5/8							
STANDARD													

Problems

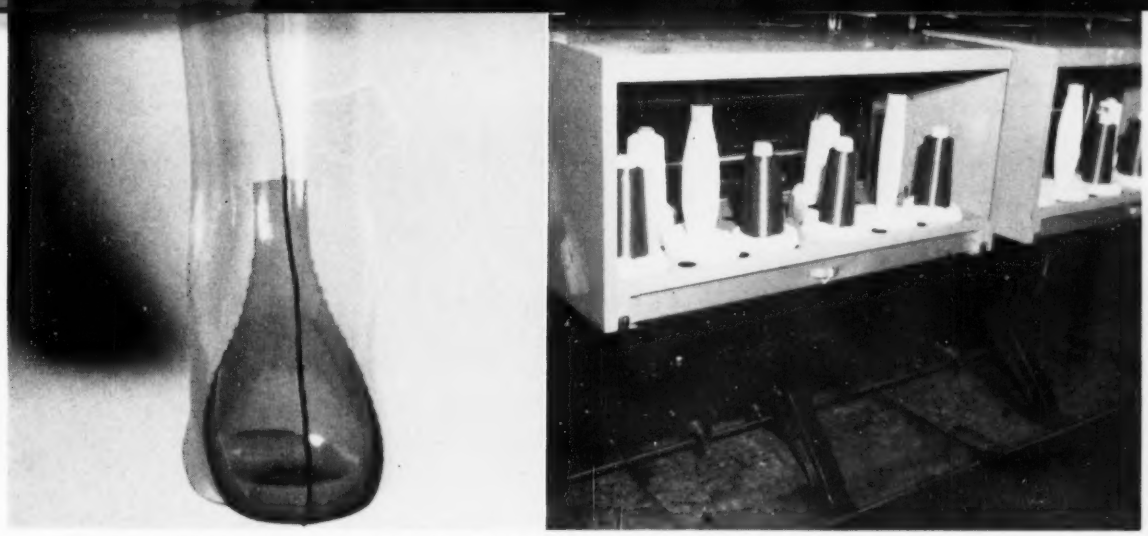
OVER THREE years ago when Sumner Hosiery Mill of Gastonia, N. C., first introduced the colored-heel nylon hose, many people thought, and said, the "novelty" would never amount to anything. Like 60 gauge, the gay heels were a little slow in being accepted, but when they were accepted they went all the way, as far as hosiery promotions were concerned.

Some mills are manufacturing colored-heel nylons only, and many mills have 30, 40, or 50 per cent of their production on this style. Such hosiery is viewed by most people as a staple item, and a great many mills consider it a permanent style to manufacture on their full-fashioned machines.

Like anything new and different, starting and keeping fine gauge full-fashioned machines on this type of hose presents many problems. Of course, how the finished product looks depends on many factors along the rough and bumpy road of production and quality control.

In manufacturing colored-heel, sole, and toe nylons, the aristocrat of the general terminology of colored heels, it is naturally very important to have a good dye job on the colored yarn used in producing the hose. There are several good methods of dyeing yarn, and each is equally practical as long as the yarn is dyed evenly and coned well with a good finish.

Constant Density Cones. As most ladies' full-fashioned manufacturing production men know, it is practically impossible for a throwster to produce each cone of yarn thrown on the tube with constant density. Even though the yarn is processed exactly the same, the cones will differ, and this will in turn cause much trouble in seaming the colored heel hose. When the seamer joins the outside selvages of the foot, if one side is knit only slightly tighter than the other, she has a problem making the two join at the top of the heel in



HEEL SPLICING (left) does not match. Note that the left side is wider than the right. This imperfection shows up clearly on colored heels and must be avoided. Right, arrangement of grey and colored yarns for knitting colored heels.

in Making Colored-Heel Nylons

such a way that they will be equal in both height and width.

Tension in Knitting. There may be factors other than variation in cone density causing unevenness of the fabric. Tension and friction on the yarn from the cone to the needle have much to do with this also. It is important that all of the cones on the machines are threaded alike. If the yarn does not follow the same course from the cone to the carrier tube, naturally the amount of drag will be different on each end. If the porcelain eyes or the metal tubes guiding the yarn become worn and grooved, sometimes this will make a difference in the amount of drag and subsequently an irregular out of a first quality stocking. There must be methods devised by each individual mill to keep these factors under control, as well as to keep the actual knitting head running straight.

Closer Inspection Required. Colored-heel nylons present many and varied problems in all steps of manufacturing. When you work with a dark fabric, such as black

By HAROLD SUMNER
Partner and Supt., Sumner Hosiery Mill

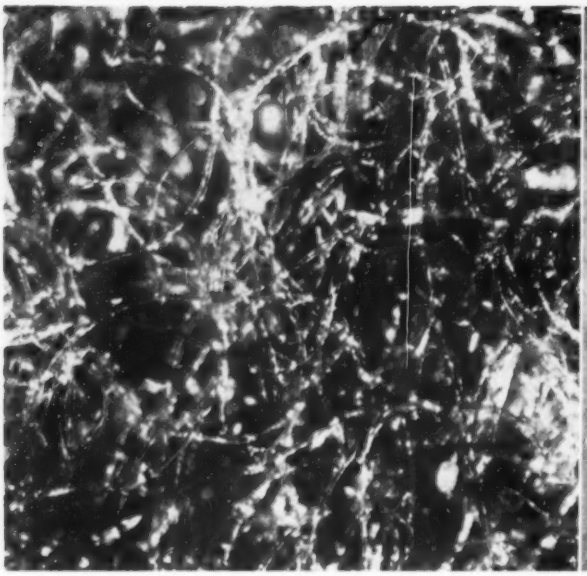
EXCLUSIVE

heels or dark brown heels, the menders, pull threads, and yarn defects are naturally more difficult to see. In almost every mill the grey goods examining forms are black, and when the dark fabric is placed on a dark form, the inspector will have to look very closely to see the defects. Usually, when an inspector is first put on this type of work, her production is slowed considerably, but after keeping her on it for some time it is found that speed comes up to a point almost equal to production on white work.

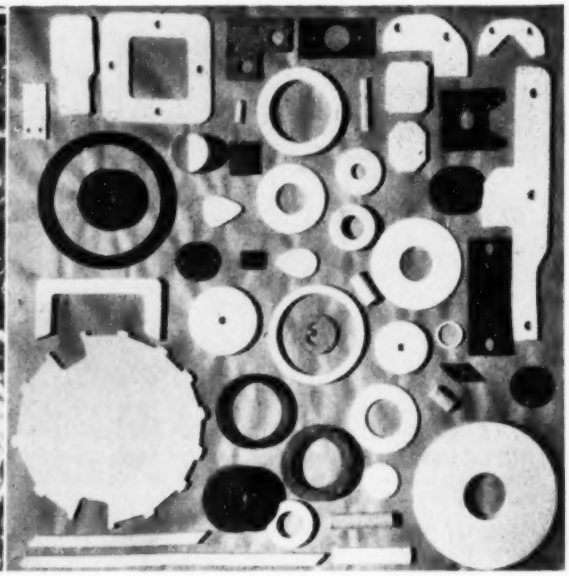
Bleeding at Preboarding. After leaving the grey inspection room, the problem of colored heels becomes different. It is important to have the colored yarn dyed by a reputable dye plant so the color of the yarn will not bleed at the high pressure and temperature the hose are subjected to in the preboarding machine. If the yarn does not bleed or fade into the undyed yarn of the colored-heel stocking in the preboarder, the problem of color running is solved.

From the dyeing machine on, the colored-heel hose are handled much the same as self-colored heels. Of course, along the production line of inspecting and pairing, all the operators have to be much more careful in their foot inspecting to see that no manufacturing or yarn defects get through among first quality stockings.

Colored-heel nylons are, no doubt, here to stay, as emphasized by the fact that over 85% of the branded lines have them to offer. It is not necessary for mills to restrict their colored heels to black, brown, and navy, because at the present time they are offered in red, green, purple, and gray for color conscious women who require that their hose match other wearing apparel. Although colored heels are not volume sellers, there is a great potential in the manufacture of these shades for the color and fashion-minded women of the United States who demand something beautiful, something new, and something different.



INTERLOCKING OF FIBERS in wool felt. Photomicrograph enlarged to approximately 75 diameters shows the interlocking fibers in wool felt. Oval spots at several points show particles of oil entrapped by the material. Wool fibers are compacted into three-dimensioned fabric.



CUT FELT PARTS. One of the most versatile of all fabric materials, felt is an essential material for a wide range of industries. The parts in the photo show a few of the thousands of precision-cut felt parts now being fabricated in the cutting rooms of felt manufacturing companies.

Know How Wool Felt Is Made?

ALTHOUGH far removed from some textile operations, such as spinning, weaving, finishing, knitting, etc., wool felt manufacturing is part of the textile industry. This article on wool felt is considered of general interest.

By LEON D. GRUBERG
EXCLUSIVE

ADVANCED research on the structure of wool, modifying the fiber's properties by the use of chemicals, and the blending of wool with man-made fibers for industrial applications, have all combined to focus attention on wool felt. Unquestionably one of man's oldest and most versatile fabrics, wool felt, both in its extending applications and method of manufacture, has kept pace with modern technology. To understand what wool felt can ultimately do, we must know something about what it has done. In short, to know where it is going, we must know where it has been.

Definition. According to Felt Association member manufacturers, and such independent groups as the Society of Automotive Engineers and the American Society for Testing Materials, felt is a fabric built up by the interlocking of fibers by a suitable combination of mechanical work, chemical action, moisture, and heat, without spinning, weaving, or knitting. True felt is a non-woven, fibrous material consisting of one or more classes of fibers, i.e., wool, reprocessed wool, and/or reused wool, with or without admixture with animal, vegetable, and man-made fibers.

The entire process of felting is based upon the inherent tendency of wool fibers to coil, tangle, and bond together into a practically inseparable mass. Coiling and tangling provide resiliency and elasticity to the fabric. The bonding of the fibers, due in part to the scaly structure of wool, imparts strength to the finished felt product. It is the scaly structure, combined with other properties including elasticity, crimp, strength, and swelling, that makes it a superior fiber for felting. As a matter of fact, the felting property of wool is

so superior to all other fibers that as little as 20 per cent of wool may be used in the manufacture of some felts with the remaining constituent materials made up of hair, cotton, silk, or man-made fibers. The process of manufacturing felt is variously referred to as felting, fulling, milling, or shrinking.

The felting property of wool fibers is highly desirable in the manufacture of felts per se, for use in such products as hats, blankets, clothing, and industrially for gaskets, seals, wicking, polishing wheels, anti-vibration mounts, etc. On the other hand, these same properties are likewise responsible for the restricted use of wool in the manufacture of shirts, socks, or other items which must be subjected to ordinary laundering procedures. During laundering the felting process may be continued, causing the product to shrink in an uncontrolled manner.

History. In the history of man, non-woven or pressed felt is probably the most ancient form of textile fabric, antedating weaving. One legend ascribes the introduction of felt to an 11th century French monk, but actually the history of felt goes back much further.

Among the earliest known users of crude forms of felt were the Mongolian tribes of Asia who still use *yurts*, or portable huts, saddle cloths, and blankets made of felt fabricated by methods that have been used for hundreds of years and handed down from one generation to the next. In his *Iliad*, Homer, who lived about 1000 B.C., mentioned felt, and Pliny the Elder (A.D. 23-79) described the manufacture of felt by the Gauls who made it tough enough for military use in shields and armor by moistening the wool with vinegar during the felting process.

Real progress in the development of a felt industry, however, was not made until the advent of a mechanical device for the carding of wool in 1748. Carding led the way to the formation of a greatly improved and more uniform structure of wool fibers from which the production of felt could be more readily undertaken. During the same century, another very important and evolutionary step in connection with the development of improved mechanisms for creating the sound in the clavichord, or early piano, gave felt another push forward.

It was discovered that the use of wool felt instead of leather to cover the hammers that strike the keys would produce a far superior tone. Then it was found that a softer grade of felt best served to dampen the vibration of the strings and silence the tone after finger pressure was released from the keyboard. While all this paved the way for development of the modern piano as we know it, at the same time these specific requirements for a fabric of predetermined density and thickness did much to improve the felt making art.

Feltmakers faced and solved the difficult problem of producing a precision material. Thicker and somewhat softer grades were necessary for the bass notes, whereas a thinner, harder quality was required for the treble. These variables in thickness and density had to be incorporated into a single strip in a required gradation. Another problem was to produce a very soft damper felt that could be used to silence multiple strings and still retain long life. These problems were solved and proper types were produced which rendered invaluable service in the further evolution of the piano down to its present day construction.

About 1820, J. R. Williams, an American, invented the first mechanical process for the production of felt. Actually, manufacture in any quantity in the United States started in Winchester, Mass., when Robert Bacon began to make small amounts of it for hats and slippers about 1825. Thereafter the industry grew slowly but steadily.

Shortly after the Civil War, Enoch Waite, a native of England who had migrated to the United States, founded a mill at Lawrence, Mass., and manufactured felt on a larger scale than his predecessors. Meanwhile, another immigrant, Alfred Dolge, from Germany, began to make specialized piano felts in a small plant in Brooklyn, New York, in 1871. His high-grade products were awarded the Gold Medal at the Vienna Exposition in 1873 and, as a result, he received orders from piano manufacturers both here and abroad.

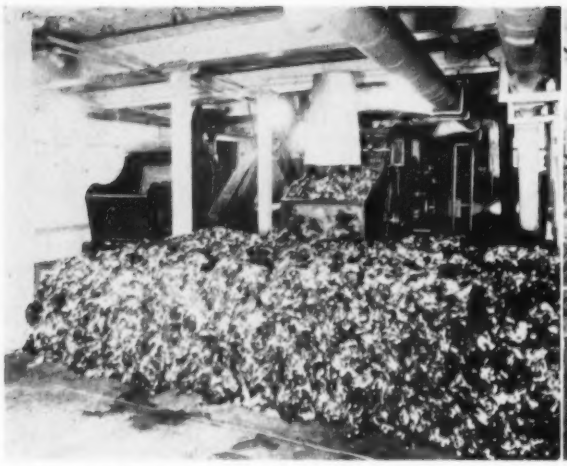
Now manufacturers were coming into the industry in greater numbers. William H. Sweatt and Joseph Ray started the City Mills Felt Company at Norfolk, Mass., in the early 1870's, while Taylor and Bloodgood set up a plant at Rahway, N. J. Alfred Dolge began to expand and established a mill at Brockett's Bridge, Herkimer County, New York. Subsequently, the name of the town was changed to Dolgeville in his honor.

Other companies that contributed to the growth of the industry were the Faatz-Reynolds Felting Company at Lestershire (now Johnson City), New York, and the Nelson-Dedicke Felt Company at Middleville, New York. By the end of the 19th century there were perhaps twenty felt making establishments in the United States producing industrial, mechanical, and apparel types for such end uses as petticoats, hats, skirts, linings and paddings, polishing, lubrication and filtration, piano felts, and saddlery and pads for horses and harness.

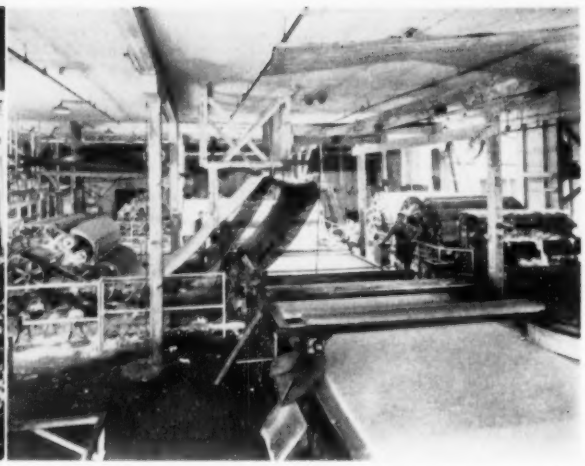
Raw Materials. While the felt industry uses all types of wool in the manufacture of its product, in common with the woolen industry and unlike the worsted industry, felt makers prefer short fibers. These, while not suitable for textile manufacturing and weaving, have desirable felting properties, and thus the industry is a large user of the wastes, noils, and short fibers produced as by-products of the worsted industry.

Among the properties of wool fibers that contribute to the felting process are: fiber fineness, scaliness, crimp, flexibility, and elasticity. In addition, other properties important to the felt makers include swelling, migration, pH, previous chemical treatment, wet strength, structure, dimension, and length.

The Manufacturing Process. Actually, the mechanics of making felt have not changed very much



BLENDING MATERIALS FOR FELT. Wool, clippings, and various other fibers are mingled to form the blend that is fed into the mixing picker where further mixing and blending are done.



CARDING. Six-cylinder white goods carding set used in manufacture of wool felt. Included are four breaker cylinders, one finisher straight card, and a finisher crosser card to the left.

down through the ages. While the processes have been refined, improved, and made subject to scientific control, the manufacture is still largely a combination of wool and work. Perhaps the most important steps are: blending, carding, hardening, fulling, scouring, and finishing.

Blending: When received at the felt mill, the raw wool is in a matted form. A battery of machines is used to separate the fibers, comb out foreign material, and blend the wools in carefully controlled proportions.

Carding: After blending, a carding operation follows in which the fibers are combed and placed in a more or less parallel position. It is at this point that the process begins to differ from the manufacture of clothing materials or other woven woolen fabrics. This is the time that the woolen manufacturer would separate the combed wool into strands, twisting and spinning it into yarn for weaving. But the felt manufacturer is not interested in weaving, so he takes the fibers off the carders in a full width web or film, approximately 80 inches wide, and builds them up one layer on top of another until a batt of the desired weight is attained. If the end product is to be roll felt for use, for example, in apparel items, the batt may be six inches thick, 80 inches wide, and 40 yards long. If the end product is sheet felt, used for industrial and mechanical applications, the batt may be as much as three feet thick.

Hardening: Although the preliminary steps and many of the terminal operations in felt manufacturing are the same as in textile manufacture as a whole, the hardening process is peculiar to the felt industry alone and has no parallel in the textile or other industries.

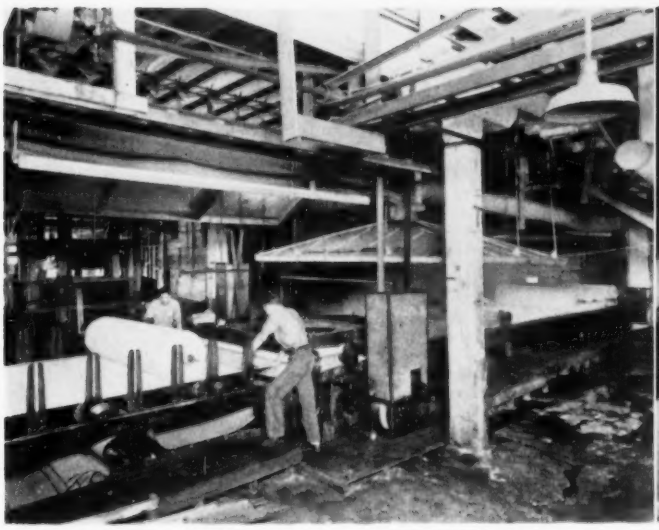
During hardening, which serves to integrate the individual webs in the batt by cross-bonding or interlocking the fibers, the mass of material is moistened and saturated with steam, causing the fibers to shrink. While still moist, the mass is passed between oscillating and vibrating plates, causing the fibers to tangle with each other along their respective paths of least resistance. The felt hardener, a specially designed press, consists of a solid or perforated steam-fed bed plate equipped with an oscillating or vibrating top platen having an intermittent and adjustable stroke.

A movable apron is used to feed the batt into the press which processes it from end to end in stages. In hardening, which actually is the initial step in the fabrication of true felts, steam pressures of 5 to 10 psi and platen pressures of approximately 70 psi are used. The physical effect of hardening is such as to reduce the thickness of roll felt batts from 6 inches to one inch or less, and sheet felt batts from a thickness of 3 feet to 4 inches.

Although the felt, at this stage, has little strength, for some purposes this can be a terminal operation as, for example, when dried and roughly finished and used for insulation and sound deadening. In the next intermediate step the semi-hardened batts are placed in a vat of warm, weak sulfuric acid. This opens the fibers and prepares the batt for the next step, fulling.

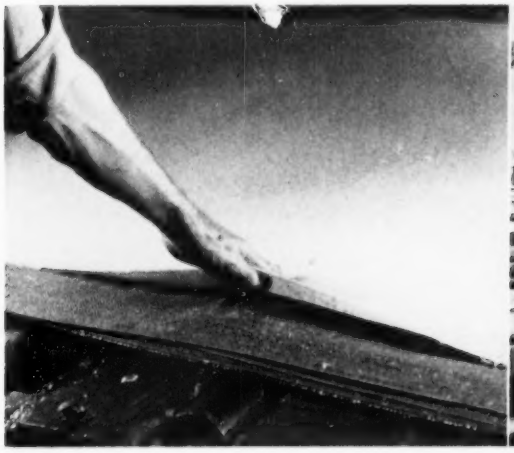
Fulling: While the initial felting operation (hardening) is peculiar to the felt industry, the final operation, fulling, is common to the entire wool-textile industry. But where fulling is a terminal operation in the fabrication of woven woolens, as in the manufacture of the green wool baize used to cover billiard tables, it is the all-important step in felt making. It is during this operation that density, thickness, texture, and yardage of felt are controlled. Hardening can only do so much and no more; the migration of fibers induced by interfacial pressure and vibration reaches a limit and can be further induced only by impact. That's where fulling comes in.

Fulling, an advanced shrinking operation, is carried out by means of direct and controlled impact in conventional one-, two-, and four-hammer mills. These mills are bin-like receptacles in which wooden

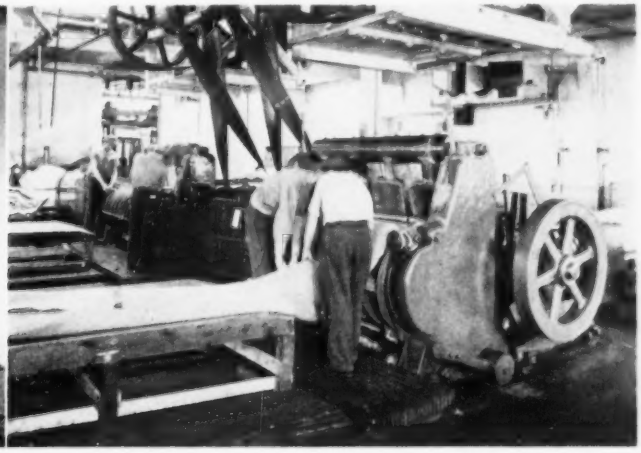


HARDENING. Carding batts are laid on the hardener (batts shown on right of machine). After passing over the steam chest and under the plate the batts are rolled up, as shown on left. This machine was imported from England and manufactured by Bywater.

CLOSEUP OF HOT, MOIST BATT on the table before hardening. Next process is fulling operation in which felt is kneaded by large power hammers in a tub. Kneading tightens up embrace of fibers.



PICTURED AT THE OPPOSITE END OF PRESS, the reduced thickness and fabricated structure of the felt are apparent before fulling. In fulling the material also undergoes shrinking.

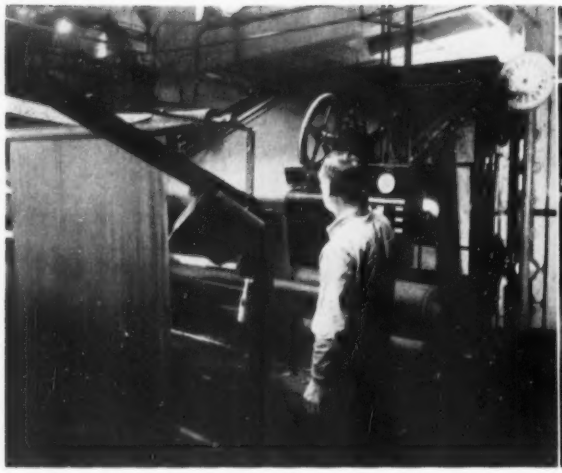


FULLING FELT. In a moist, steamy state, felt is kneaded in fulling mill. Periodically, the material is unrolled to prevent it from felting down into a conglomerate mass. The operation is then repeated until the material acquires the required density.

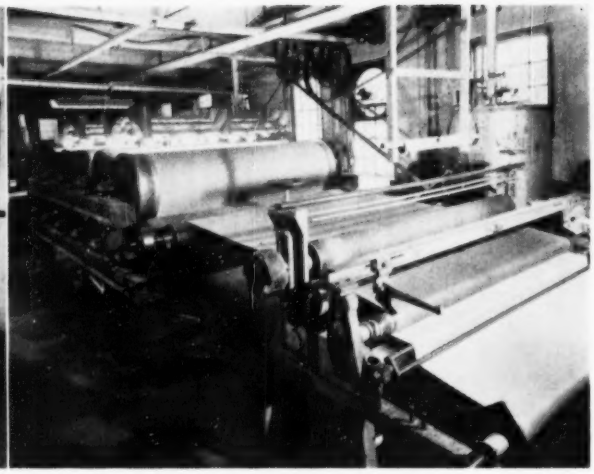
impact hammers, driven by crank or eccentric mechanisms, roll, lift, pound, and squeeze the felt against the sides of the fulling vats. The felt, in the meantime, has again been saturated and a lubricating agent, which may be water, soap, or palm oil, has been added to further promote migration of the fibers.

For some of the lighter felts, warm water is sufficient; for soft finished pads and millinery grades, palm oil soap in the proportion of 1 to 10 parts of water is usually preferred. The very dense, heavy-duty mechanical and glass-polishing felts and felt wheels are most readily fulled with the assistance of a 4-degree Twaddell solution of sulfuric acid. Fulling continues for from a few minutes for lightweight felts up to 12 hours or more for hard felts, sheets, and wheels. Dimensional shrinkages attained during fulling approximate 10 to 20 per cent for pad weights, 40 per cent for backchecks which comprise the hardest grades of roll felts, and 75 per cent for hard sheet felts.

Scouring: The fulled felt is next scoured and neutralized to remove residual soap, dirt, grease, or acid. Then, if required, the material can be dyed, hydro-extracted, and dried. Roll felts are tenter-dried under tension in a circulating hot-air dryer at temperatures ranging from 140 to 220 F. If a specific density greater than that obtained from maximum fulling is required, sheet felts can be compacted still farther in hydraulic presses. For the extremely dense sheet felts, such as the "hard" and "rock-hard" qualities, pressing is a definite supplement



DRYING WOOL FELT. As it enters the drying oven, felt is impaled on tenter hooks along the edges and is stretched to a uniform width. After ten passes back and forth through the dryer in 240 F temperature, the material is rolled out, ready for inspection.



INFRA-RED RAYS DRY FELT. In this simplified modern felt drying machine infra-red units are used. Moisture is rapidly evaporated under the light rays, which penetrate the material, literally "drying it from the inside out."

to fulling and a part of the manufacturing process, as distinguished from an ironing or finishing treatment.

Finishing: Felt for certain purposes can be left rough as it comes from the dryers. More often, depending on the type, felts are pressed, sheared on the surface to remove long fiber ends, calendered, or in the case of some of the harder felts, run through a drum sander. Aside from dyeing, wool felts are frequently subjected to various protective treatments by means of impregnations. These include fire retardants, mold- and moth-proofing, water repellents, and others.

Still other treatments may be used to modify the physical characteristics of a felt to serve a specific purpose. Such treatments include stiffening or hardening by sizing, or impregnation with special compounds. Treatment with a thermo-plastic compound, for example, permits the felt to be stretched or pressed over a form and then permanently stiffened by heat forming.

Because of the uniform dispersion and random orientation of the constituent fibers, wool felts possess two unique characteristics which help explain why some felt manufacturers have expanded their operations to include the fabrication of mechanical parts. The first of these special properties is uniform wear, which makes the fabric suitable for covering metallic and other surfaces as a protection against dents, squeaks, and scratches and also for frictional uses where the fact that wool felt never becomes threadbare assures uniform performance throughout the life of the part made from it.

The second special property is that it does not ravel or fray, irrespective of the direction in which it may be cut, but cuts to an accurate edge in any pattern. Thus, it is not unusual to find roll and sheet felts die-cut to blueprint patterns and dimensions in three decimal tolerances—also skived to bevels and laminated by stitching or adhesives to form undercuts and special contours. Circular wicks of extremely high efficiency are made in the cutting division of plants by pulling the felt through high-speed revolving dies. Sheet felts are bored, turned, and carved to form parts for machines of many kinds, and even turned into artificial limbs for amputees.

Varieties of Felt. Indicative of the wide industrial areas served by the felt industry—which, incidentally, because of this is often regarded as a barometer of the nation's industrial activity—is the fact that more than 150 varieties of felt are made and the material has found literally thousands of industrial applications.

Felt is one of the most versatile of all fabrics, not only in form, but in the wide variety of its uses. It is made in a greater range of weights and thicknesses than any other material of a fibrous nature. The thickness range is from 1/32nd of an inch to three inches, and the weight ranges from 3 ounces to 65 pounds per square yard. Such precision goes into the manufacture of felt that the industry today can guarantee surprisingly close tolerances in weight and thickness. It can be made with a tolerance as small as 5/1000th of an inch.

True Felts and Woven Felts. Too often the error is made in calling all felt-like materials felt. True felt, as we have seen, is a non-woven product. Although not all felts are made from wool, the most superior varieties are predominantly wool. Wool felts are readily distinguished by appearance and touch from most other felt-like products and so-called felts with the possible exception of fur felt, a mainstay of the millinery industry.

Fur felt is manufactured, as the name implies, from the hair of animals which has been treated chemically by a process known as carroting, which imparts feltability to these fibers. (During the carroting process, oxidation of the fibers takes place under carefully controlled conditions by applying

a nitric acid solution containing a mercury salt to the fibers. Hydrogen peroxide is safer and can be used in place of the highly toxic mercury salts.) Fur felt is used to make hat bodies, which are subsequently shaped and formed by blocking. Wool felt, however, also is used extensively in the millinery trade, where it is known as flat felt, and to a more limited extent in special types of men's hats.

Typical Uses. Typical applications of felt include its use for polishing glass, finishing metals, filtration of air and liquids, for inking rollers in the graphic arts; lubrication and wicking; and as a decorative or functional material for clothing, linings, footwear, military, and sundry uses. It fills many functions for the military forces which use it ideally for arctic boots and as an essential material for rocket construction and in guided missiles, not to mention other military applications that must remain secret for the time being.

In footwear, this fabric has long been most valued as the basic material in slipper manufacturing and in addition is used for insoles, soles, tongues, box toes, and other parts of shoes and boots. Some 30 to 40 different types are used in the manufacture of pianos, and it finds upwards of 30 applications in the construction of automobiles. Large quantities are used by industry in general for thermal and sound insulation and as an anti-vibration material and for vibration isolation.

New Advances. The latest advances in scientific research tools, the electron microscope and X-ray diffraction, are being intensively used by researchers here and abroad to learn more about the very structure of wool fibers with a view towards improving the production of woolen textiles, including felt.

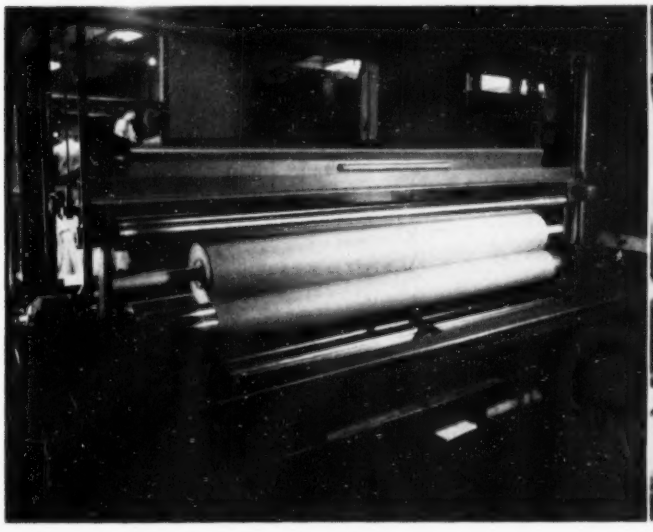
In England, for example, textile technologists hope to learn more about the mysteries surrounding the structure of fibers by studying proteins—the basis of all life. In the words of Professor W. T. Astbury of Leeds University, the touchstone of the science and technology of fibers is molecular chain-folding and the interpretation of elastic properties. He says that since proteins are the chief and indispensable constituents of all vital activity, the question of the detailed structure of wool and related fibers has assumed even more imposing proportions in the academic world than in the technological.

On still another research level, scientists at the U. S. Department of Agriculture's Western Regional Research Laboratory, Albany, Calif., have been studying the use of chemicals to modify wool. They have found that propiolactone can be used to advantage to impart a marked improvement in the ability of wool to felt. Not only does the propiolactone-treated fiber felt more rapidly than does the untreated wool, but the resultant felts are more dense and require considerably greater force to tear.

The modification with propiolactone is a simple process, the chemical being dissolved in an organic solvent (carbon tetrachloride) and the wool soaked in this solution at room temperature for about 48 hours. Aside from the increased ability to felt, the modified fiber becomes whiter in color, which is important in view of the increasing demand for lighter wool for fabrics for pastel shades.

During World War II about 80 per cent of the felt industry's output was used for war contracts, or about 25,000,000 pounds per year. At the present time there are some 46 felt-making establishments in the United States alone turning out some 50 million pounds of felt annually, worth $60 million.

FINISHING FELT. Finished felt is automatically straightened, trimmed, and rolled on a Cameron machine. Two rolls of 36" material, 95 yards long, are being produced in the operation pictured here.



FELT USES. Polishing wheels using felt at Pittsburgh Plate Glass Co., one of many uses for various kinds of felt finding application in modern industrial plants.

Research pays off again! This time it's

A Better High Tenacity Rayon

TIRE CORD twisted from this new type of yarn, which even has a differently shaped filament cross section, has about 20 per cent higher strength, a substantial improvement in resistance to flex fatigue, and lower sensitivity to moisture. Belts and hose made with this Super Cordura yarn are also being evaluated.

"SUPER CORDURA," described by the Du Pont Company as the greatest single improvement in high-tenacity rayon since 1935, will be available in limited quantities in September. Full production of the new filament is slated for January, 1954, at the Spruance rayon plant, Richmond, Va.

Du Pont spokesmen claim Super Cordura to be 20 per cent stronger and with greater fatigue resistance than existing high-tenacity rayon. This added toughness is attributed in part to the fiber's smooth surface and predominant skin structure, both arising from a basic change in rayon manufacture evolved from eight years of research.

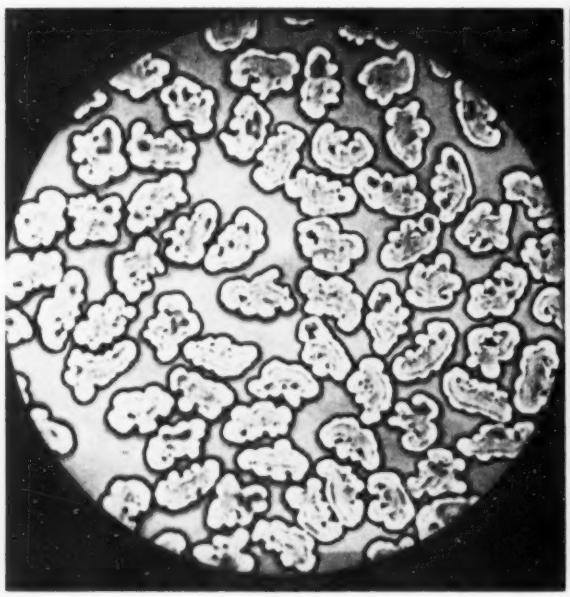
Super Cordura has a unique molecular structure from which its unusual strength is derived. There is an optimum distribution of cellulosic chains between crystalline and non-crystalline regions, together with an optimum orientation of these chains.

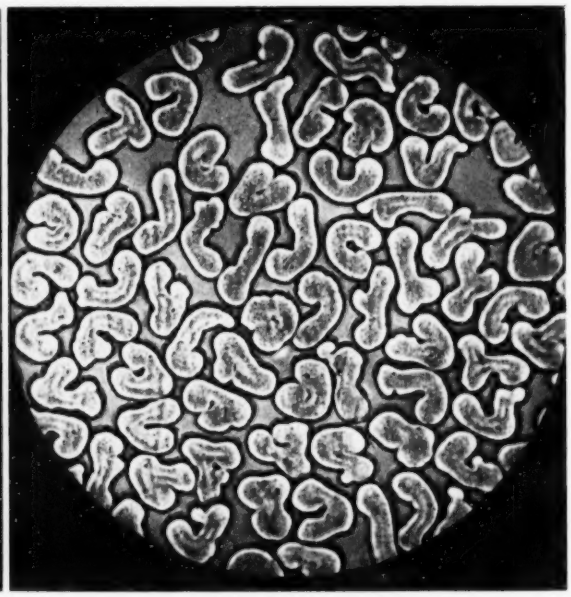
The development of Super Cordura came about when Du Pont first realized the need for improved tires in the mid-40's. High powered engines in passenger cars and sustained high speeds of superhighway travel placed greater emphasis on tire safety. Expanded usage of synthetic rubber during the postwar period combined with increased operations of off-the-road equipment demonstrated the need for a stronger tire. Advancing military techniques also called for strong, tough tires.

With this as an objective, Du Pont gradually diverted its rayon research efforts from ways to expand high-tenacity rayon manu-

CROSS-SECTION OF TYPICAL TIRE RAYON shows each filament to have a thin skin and wrinkled out line. Both characteristics detract from the fiber's performance. The key to filament uniformity and strength is claimed to be proper and precise balance of coagulation and regeneration rates during extrusion of the viscose spinning solution, a technique achieved in the manufacture of Super Cordura.

SUPER CORDURA HIGH TENACITY RAYON has a structure which is predominantly skin. Many filaments have no core, while in others only a very small core portion is visible. The outline of the filaments is relatively smooth; the sharp, deep crenulations being virtually absent. The uniform filament and molecular structure of this yarn are major contributors to its high property level.





Mooresville Booklet Tells Decorative Fabrics Story

A short, graphic view of the design, production, and sales of decorative fabrics is provided in a new two-color, 20-page booklet issued by Mooresville (N. C.) Mills, Decorative Fabrics Division.

A succinct text, action photos, and flow chart tell the "idea to outlet" story. Designing and sales conference, research and experimental production, mill operations and marketing are discussed simply and pictured attractively.

Designed primarily for customers, the booklet should also prove of interest to textile students and others in the industry. Copies are available from the Sales Promotion Department, Mooresville Mills, Empire State Building, New York City.

Illustrating the mill's effort to produce "the right fabric, keyed to the right fashion, at the right price" are photographs of a special battery of hand looms. In just a few hours these looms translate creative ideas into fabrics for evaluation, saving delays and expensive test runs on full-size equipment and permitting color and texture experimentation at minimum cost.

"The flow chart reduces the mill's complex operations to a simple picture," Mooresville's advertising manager Darwin Heath said. "It shows how each division of the mill — Decorative Fabrics, Apparel Fabrics, Terry Products, and the Contract Division—plays its part in the total operation. The various products, steps in manufacture, and markets served are clearly outlined."

Other sections describe the advantages of straight-line production and integrated manufacture, special facilities like novelty twisting equipment, the mill's broad range of looms that provide fabrics in any desired width, the rigid system of quality control and inspection, and close liaison with customers maintained through "listening posts" — sales centers in New York, Chicago and Los Angeles — which detect the "first, faint whispers of forthcoming style changes."

A handsome swatch of upholstery fabric made at the mill decorates the booklet cover.

A previous booklet, "About Mooresville — What It Can Mean To You," tells the story of the Apparel Fabrics Division. A subsequent publication by the mill's Terry Products Division is also scheduled.

facture to means of improving its performance. Super Cordura emerged from this program.

Evaluation tests by major rubber companies and truck and taxi fleet operators have shown outstanding performances. Thinner tires which operate at lower temperatures have proven themselves in heavy use under difficult conditions. Test tires have shown outstanding ability to cope with impact and constant flexing. Carcass strength is measurably improved, while tire failure due to exposure of cords to moisture is reduced with Super Cordura. It was also learned from these tests that greater inherent fatigue resistance of this yarn would permit reduction in cord twist for some applications.

There are other opportunities for utilization of the new rayon. Heavy duty "C" and "D" section V-belts built with cords twisted from the new rayon have turned in excellent performances. The life of automotive belts built with this material has been increased more than 50 per cent, while other tests have shown as much as a four-fold improvement in the life of industrial V-belts.

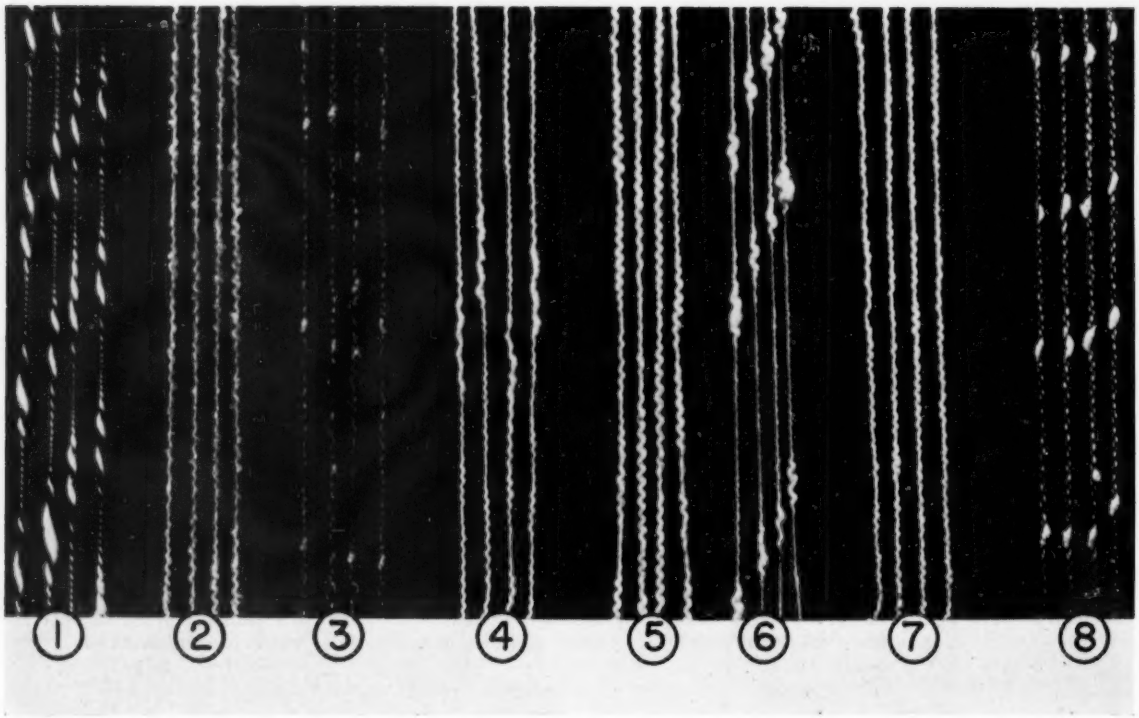
Heavy duck fabrics woven from Super Cordura are now being evaluated in flat belting for conveyors and power transmission. Braided and knitted hose of all types for operations at greater pressures than now possible are in the offing due to the higher yarn and loop strengths of this new product.

The price of 1650 denier Super Cordura will be 67 cents a pound as compared with 61 cents for regular high-tenacity tire yarn. The improved rayon is expected to compete in some cases for the same markets with nylon.

Physical Properties of Super Cordura Over Currently Produced High-Tenacity Rayons

	Super Cordura Rayon	Current High Tenacity Rayons
Yarn—1650 denier		
Tenacity, Cond. (12% M. R.), gpd	4.40	3.5 to 3.9
Tenacity, Wet, gpd	3.05	2.0 to 2.5
Tenacity, Loop, gpd	3.30	2.5 to 3.0
Ratio, Wet Ten./Cond. Ten.	0.69	0.56 to 0.63
Cord—1650/2, 11Z/11S Twist		
Tenacity, Cond. (12% M. R.), gpd	3.40	2.6 to 2.9
Tenacity, Oven Dry, gpd	3.75	3.2 to 3.3
Extensional Fatigue Rating	200-300	**50 to 150**
Conversion—Yarn to Cord Strength	% 77	70 to 76
Ratio, Oven Dry to Cond. Cord Strength	1.10	1.14 to 1.24

Tire cord twisted from Super Cordura has a strength advantage of 17 per cent to 30 per cent conditioned, and 14 per cent to 17 per cent oven dry, over those cords currently being used in tires. The lower sensitivity of Super Cordura to the effect of moisture is reflected both by its higher ratio of wet yarn tenacity compared with conditioned yarn tenacity and its lower ratio of oven dry to conditioned cord strengths. Accompanying these improvements is an increase in modulus, or stretch resistance, of yarn so the level of elongation of cord at breaking load will remain unchanged. Also, Super Cordura yarn swells about 65-70 per cent (filament cross section) compared to 90-95 per cent for conventional rayons.



SAMPLES of novelty yarns made at Lavonia: (**1**) Flaked black and white made from two strands of roving, each 1.25 hk. (**2**) 16s, 20s, and 14s combined to make a persimmon ratine. (**3**) 12s, 20s, and 14s combined to make a lemon and brown seed yarn weighing 1200 yards per pound. (**4**) 4s and 20s employed in a seed yarn weighing 950 yards per pound. (**5**) 2.25 and 20s make a ratine weighing 1050 yards per pound. (**6**) 20s and 1.75 hk flake roving twisted into a flake ratine weighing 1750 yards per pound. (**7**) 4s, 20s, and 14s combined to make a ratine weighing 1450 yards per pound. (**8**) 5s and 20s make a seed yarn weighing 1380 yards per pound.

This Mill Makes Novelties by

A short story telling how one mill modified and adapted standard machinery to fit special needs in manufacturing novelty yarns.

EXCLUSIVE

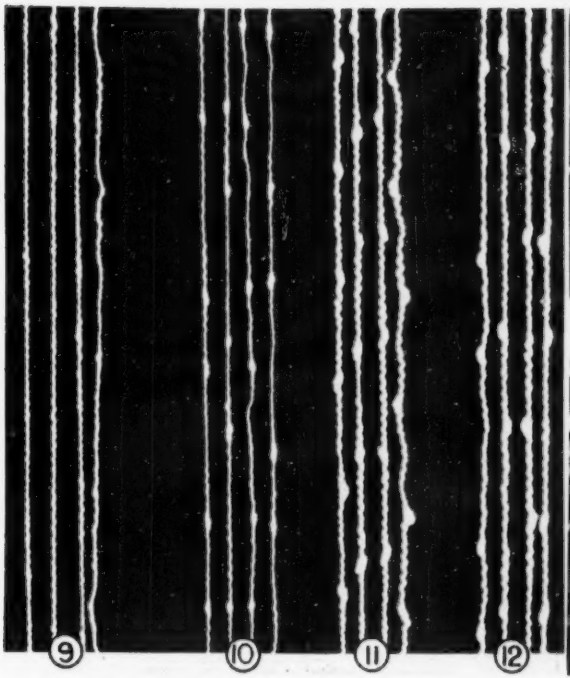
Staff Prepared

AT LAVONIA, Ga., Franklin Novelty Yarn Co., Inc., makes a variety of novelty yarns on machinery which has been adapted to do the job. This mill makes novelties on 16 modified dry twisters of different makes. All of the frames are old and range from 120 spindles per frame to 180 spindles per frame. It is necessary to change the frames frequently in making novelty yarns, and according to Ed Roberts, mill superintendent, the old frames are simple and easy to operate. 2000 spinning spindles are also utilized in making novelties here, such as the primary step in making slub yarn which is subsequently twisted for additional effect.

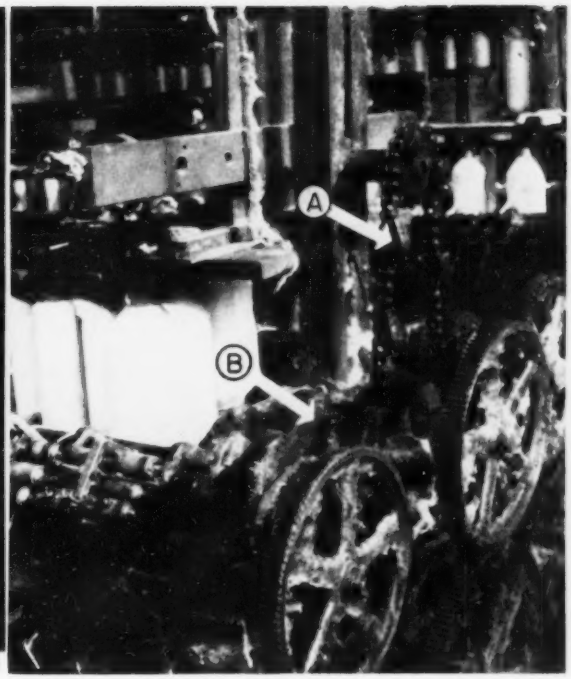
This mill accepts orders for any kind of novelty yarn that can be made from cotton or rayon or a combination of the two. Present production is about 8000 lb of yarn per week. In 1952 production amounted to 500,000 lb of yarn—all novelties.

No special machinery is used in this mill. Standard machines were erected, and the necessary attachments to make novelties were devised and made in the mill machine shop. The primary changes made to produce novelties were to install additional twister rolls and clutch gears. In some instances it was necessary only to move the rolls already on the frames.

According to C. E. Roberts, president of the mill, patience and experimenting are the most important adjuncts to making novelty yarns. 40 years of experience help to eliminate some of the guess work involved, but seldom does the first trial run or sample comply with the customer's specifications. Sometimes a dozen trials are necessary to make a sample meet customer's specifications. This mill runs orders ranging from a 5 lb sample to 30,000 lb lots. The *(Continued at bottom of page 138)*

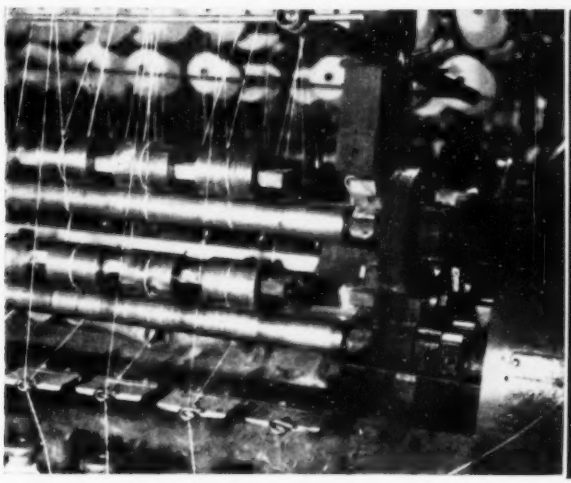


ADDITIONAL SAMPLES of novelties made at Lavonia: (**9**) Seed yarn made from 4s and 20s and weighing 1100 yards per pound. (**10**) 950 yards per pound seed yarn made from 4s and 20s. (**11**) 12s, 20s, and 300 denier rayon are combined in this seed yarn which weighs 2200 yards per pound. (**12**) 16s, 30s, and 20s constitute this ratine weighing 3600 yards per pound.

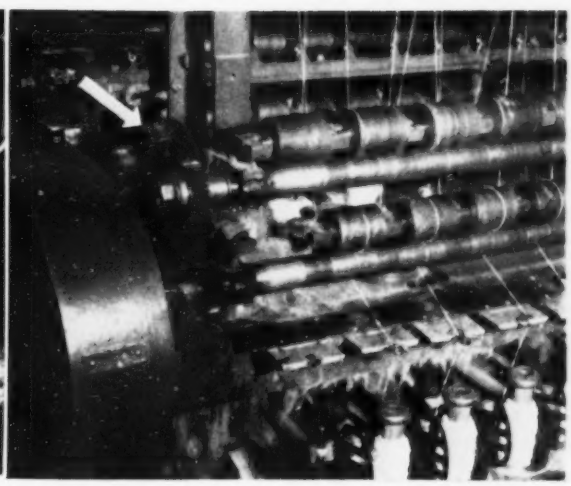


GEAR END of Fales spinning frame showing (**A**) pattern chain, (**B**) intermediate gear which moves in and out of action according to the blocks on the pattern chain. The ratchet gear is adjacent to the intermediate gear but does not appear in the picture. The first step for sample (**1**) was made on this frame. The pattern chain speeds up middle and back rolls at intervals to make heavy place in yarn.

Modifying Conventional Frames



TWISTER FRAME (H&B) has large and small gear on double rolls. One end of the yarn is fed straight down through the pig tail to prevent difficulty in making combinations on this machine. By changing the top roll gear, samples (**5**), (**7**), and (**12**) can be made on this frame.



SKIP GEAR on twister frame equipped with two sets of rolls makes samples (**4**), (**8**), (**9**), (**10**), and (**11**) by using different size gears. The same yarn may be made on frame equipped with ratchet gear.

(More pictures at bottom of next page)

Warp Knitting Filament Dacron

In preparing continuous filament "Dacron" polyester yarn for warp knitting, the yarn is generally twisted to about 7 turns per inch. Sizing with "Elchem" 1273 has also been beneficial and can be accomplished on most single end sizing machines. Application of coning oils has been helpful in reducing static and imparting lubricity to yarn in warping and knitting.

Warping. Direct warping is preferred over indirect to minimize handling of yarn. To obtain smooth, uniform beams:

(1) Tension uniformity and low tension are essential. Align creels carefully so that yarn contact with guide surfaces is held to minimum and sharp angles are avoided. Tension on individual ends should be between 2 and 3 grams.

(2) Inspect contact surfaces frequently and replace when worn. Remove size or oil deposits frequently. Use special guides of adequate hardness.

(3) Maintain relative humidity at 55-65% to minimize static. Watch for softening of size film, however, due to too high humidity.

Handle yarn carefully to avoid broken or looped filaments and stains.

Knitting. Accurate machine adjustment is important. Start out by using same settings as for equivalent deniers of nylon. Guides on both bars should be set at "high" position relative to the needle on the backward pass through the needle spaces, with a lateral position midway between needles. The needle should be set intermediate in the sinker throat with the presser bar set 0.02" forward of minimum knittable press.

Use sley (separator) points just preceding and as close to the tension tube as possible to prevent warp ends bunching and overlapping. Specially designed, very light sleys have been mounted directly on the tension tube with success.

Warp tension and runner lengths can be adjusted for decreasing beam circumference at either the brakes or tension tube. However, it is best to set tension tube to give as low a tension as possible and make adjustments at the brakes only. On newer machines, warp let-off motions take care of this automatically, but runner lengths should still be checked frequently to make sure that proper quality is being knitted.

Needles and guides should be cleaned thoroughly at end of each warp and blown out at least once per piece.

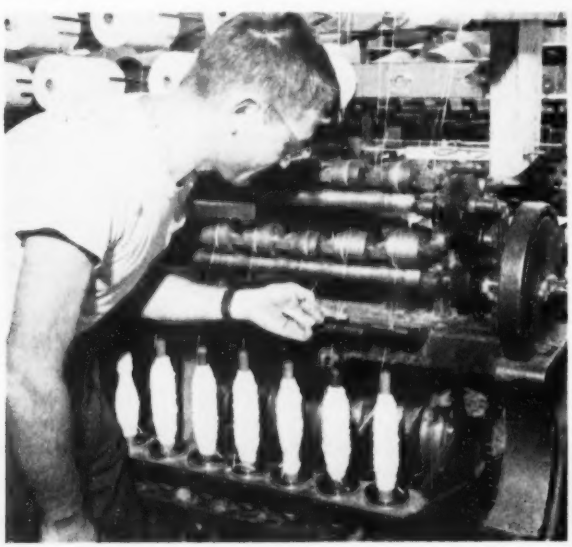
From Preliminary Bulletin CSB-D-12 "Suggestions for Warp Knitting Continuous Filament 'Dacron' Polyester Yarns." Textile Fibers Department, E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del.

(Continued from page 136)

biggest job in the manufacture of novelty yarns is making samples, according to Mr. Roberts. Less than 10% of the samples made bring any volume orders.

Ten cards, 2000 spinning spindles, and 2400 twister spindles utilize M 1" cotton to make most of the novelty yarns produced in this mill. The accompanying photographs show some of the yarns made in the mill and the machine modifications necessary to make the yarns. The yarn is usually put up on 2½ lb cones, 1 lb tubes (plain or perforated for dyeing), and in 4-6 oz skeins.

TWISTER FRAME equipped with two sets of rolls and large and small gears on the rolls makes samples (**6**) and (**7**).



PLYING YARN with reverse twist to prevent kinks. Ed Roberts, mill superintendent, examines yarn on one of four frames which has not been altered.

Wet Processing Section

ARTICLES of special interest to TI's readers engaged in the wet processing of textiles have for this September issue been grouped in a special 12-page section in recognition of the forthcoming 32nd National Convention of the American Association of Textile Chemists and Colorists.

The convention program, housing information, list of suppliers contracting for space in which to display their products and equipment, and a floor plan of the exhibition area appear on pages 144 and 145.

As usual, TI's editors will be on the scene to report news of the gathering and abstract the more practical papers for publication in this magazine. Watch for this in a later issue.

Wet processors should not confine their reading to this special section only, however, because there are many other items—news, new equipment and materials, etc.—of interest.—Eds.

This may be the answer to your problem - -

Dye Package Permeability Tester

THE DYER has long been in need of a tester capable of assigning a numerical value to the density of permeability of a dye package. Here is a tester based on the measurement of the change in pressure in a pipe through which air is flowing while a dye package covers one end. This tester was used to study the effect of package density or permeability on dye shades and physical properties of dyed 36/1 combed cotton yarn and 30/1 viscose rayon yarn.

Conclusions. Hard packages and soft packages may be traced to certain winder spindles. Apparently the permeability of yarn packages depends more on winding conditions — tension or mechanical condition of winders. There is no apparent trend for effect or values for rayon or cotton, fine or coarse yarns.

Tests showed the following results:

(1) Hard packages were much lighter in shade than soft packages regardless of their location on the dye stem.

(2) The outside of packages was slightly lighter in shade than the inside.

(3) There was a greater difference in shade from outside to inside of the softer packages.

(4) Packages on the bottom of a dye stem tend to have greater differences in shade from outside to inside.

Also worthy of note is the fact that packages which have been dyed, dried, and conditioned are harder than before dyeing.

By D. L. WORTH

*Mooresville Mills, Inc.,**

EXCLUSIVE

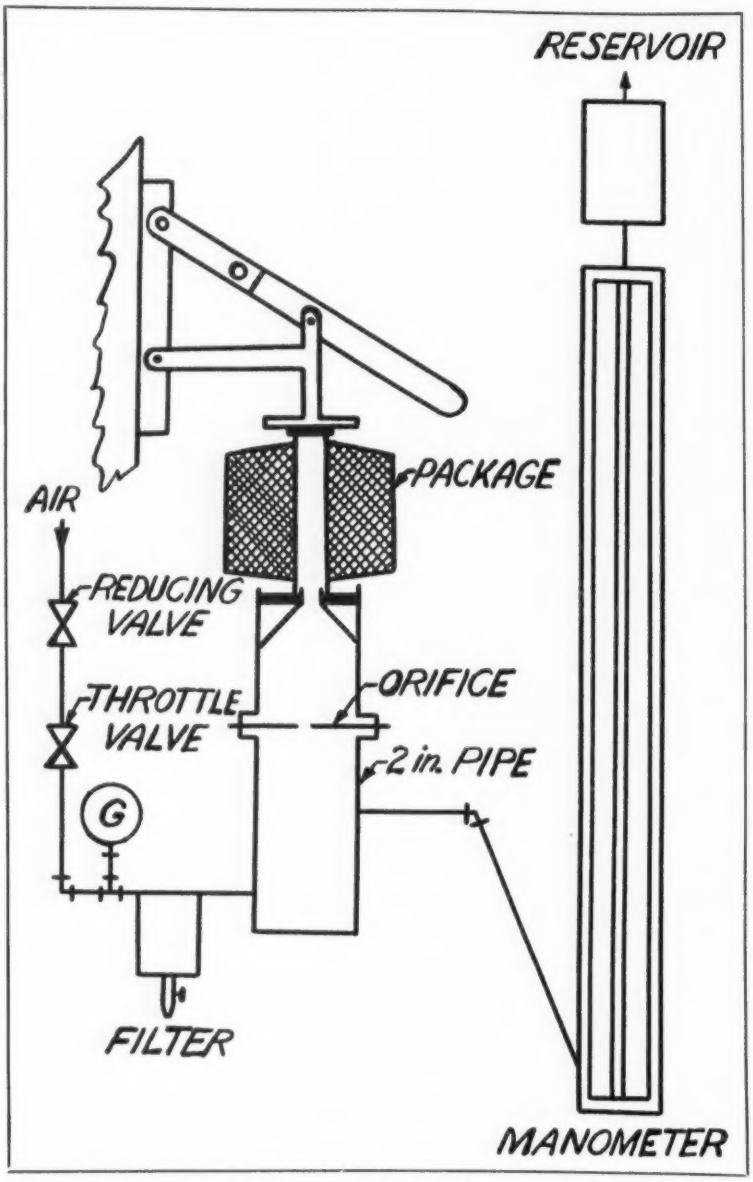
IT HAS long been the general belief of the dyer that dye packages which were too hard or too soft were not suitable for quality dyeing. There is much disagreement as to how soft or how hard a package should be for best results. Actually the permeability of a dye package to the flow of dye liquor is the important thing and not how hard or how soft the package may be, although hardness or softness is usually proportional to permeability. What is needed is a tester which will assign a numerical value to the permeability of a dye package.

Permeability Tester. The principle of the tester in the illustration (on page 140) is the measurement of the change in pressure in a pipe through which air is flowing while a dye package covers the open end. A manometer filled with Xylene is used as a pressure gauge but any other type of low-range, sensitive pressure gauge may be used. A one-inch reading on a manometer filled with Xylene is equivalent to 0.032 psi and a thirty-inch reading is equivalent to 0.95 psi.

An orifice is included between the point in the pipe where the pressure gauge is attached and the open end where the dye package is placed for testing. The data in Table 1 indicate the effect of the orifice.

The results in the table indicate no appreciable difference in corrected permeability readings as the orifice size is increased or decreased as long as the air flow remains constant. It will be noted, however, that orifices of small diameter gave readings high up on the manometer scale while orifices

*Present address: The Chemstrand Corporation, Decatur, Ala.



DYE PACKAGE PERMEABILITY TESTER, schematic sketch (patent rights reserved).

of large diameter gave readings quite low on the scale. Apparently the orifice is useful only in increasing the value of the initial reading for a given air flow.

A pressure reducing valve is used to reduce the line pressure, which should be constant, to the pressure required by the tester. The data in Table 2 give some idea of the air requirements of the tester.

Although only a small pressure is required, an air compressor set to deliver 100 psi pressure was not sufficient to deliver the required volume of air. A filter in the line assures that the air reaching the dye package is clean. The reservoir attached to the top of the manometer serves to catch the Xylene when excess pressure is momentarily applied. The reservoir is vented at the top.

The accompanying sketch also illustrates a means of rapidly clamping dye packages onto the tester. Other arrangements would probably serve just as well. The end of the pipe is fashioned in such a way that the lower end of the metal dye tube fits snugly against a rubber washer which prevents air leakage. When the handle of the clamp is brought down, the rubber disc is pressed against the upper end of the dye tube which seals it against the passage of air. During a test, the air passes through the holes in the dye tube and on out between the yarn on the tube.

During a test, it is necessary to begin with an initial manometer reading because there is no air flow at zero reading. The initial reading desired will depend on the orifice used and the range of permeability of the dye packages to be tested. That set of conditions which gives the widest separation of hard and soft packages (see Table 3) is best because of the greater precision in reading the permeability of intermediate packages.

As shown in Table 3, the widest separation of hard and soft packages is obtained with the largest diameter orifice (2.07 in. = inside diameter of 2-inch pipe) and with the largest initial reading. There is an upper limit on the initial reading because a reading must be selected which will allow the largest permeability reading to fall on the manometer scale. It will be noticed in Table 3 that although

Table 1
Effect of Orifice Size on Permeability Readings at Constant Air Flow

Orifice Diameter, in.	Permeability Reading, in.		
	No package	Package	Corrected
0.25	30	30	—
0.50	16.7	23.8	7.1
0.66	7.0	14.3	7.3
0.81	3.4	11.1	7.7
2.07 (none)	0.7	8.2	7.5

the differences in permeability readings increase with increase in initial reading and orifice size, the percentage difference remains the same. The increase in the differences in permeability readings is due to an increase in air flow.

Practical Applications

Typical Permeability Tester Readings. Table 4 illustrates typical permeability tester readings. These average values do not show a definite trend toward higher or lower values for rayon or cotton, fine yarns or coarse yarns. Apparently the permeability depends more on winding conditions — tension or mechanical condition of winders.

Effect of Air Permeability on the Levelness of Shade and Physical Properties of 36/1 Carded Cotton Yarn. In order to eliminate some other variables, packages of low, medium, and high density were placed on dye stems of a package dyeing machine so that all the different density types were placed at locations on the top, middle, and bottom of dye stems and on different stems and dyed light blue. These packages were checked for shades within packages and between packages with the following results:

(1) The hard packages were much lighter in shade than the soft packages regardless of their location on the dye stem.

(2) The outside of packages was slightly lighter in shade than the inside.

(3) There was a greater difference in shade from outside to inside of the softer packages.

(4) Packages on the bottom of a dye stem tended to have greater differences in shade from outside to inside.

Packages which have been dyed, dried, and conditioned are harder than before dyeing. For example, a package which had a corrected permeability reading of 6.4 before dyeing had a reading of 17.6 after dyeing. This might be of importance if a lot has to be over-dyed.

The packages studied were conditioned at standard conditions before and after dyeing and tested for yarn number, skein break, and

Table 2
Pressure Gauge Readings when Throttle Valve is Varied from Closed to Open

Orifice Diameter: 0.66 inches

Throttle Valve	Manometer, in. Xylene	Gauge 1, psi	Gauge 2, psi
Closed	0	21	0
Part open	7	15.5	1.4
Part open	15	12.3	3
Full open	22.5	10	4.6

Table 3
Effect of Orifice Size and Initial Manometer Reading on Sensitivity of Dye Package Permeability Tester

		Orifice Diameter, Inches		
Initial reading:	**0.5 in.**	**0.66**	**0.81**	**2.07**
Soft package,	non-corrected reading, in.	2.4	3.5	6.9
	corrected reading, in.	1.9	3.0	6.4
Hard package,	non-corrected reading, in.	3.8	5.5	11.4
	corrected reading, in.	3.3	5.0	10.9
Difference		1.4	2.0	4.5
% Difference		42.4	40.0	41.3
Initial reading:	**1.0 in.**			
Soft package,	non-corrected reading, in.	3.8	5.3	10.5
	corrected reading, in.	2.8	4.3	9.5
Hard package,	non-corrected reading, in.	5.8	8.1	17.0
	corrected reading, in.	4.8	7.1	16.0
Difference		2.0	2.8	6.5
% Difference		41.7	39.4	40.6
Initial reading:	**2.5 in.**			
Soft package,	non-corrected reading, in.	7.2	9.5	18.1
	corrected reading, in.	4.7	7.0	15.6
Hard package,	non-corrected reading, in.	10.2	14.0	28.6
	corrected reading, in.	7.7	11.5	26.1
Difference		3.0	4.5	10.5
% Difference		38.9	39.1	40.2
Initial reading:	**4.5 in.**			
Soft package,	non-corrected reading, in.	10.7	13.9	
	corrected reading, in.	6.2	9.4	
Hard package,	non-corrected reading, in.	14.7	20.2	
	corrected reading, in.	10.2	15.7	
Difference		4.0	6.3	
% Difference		39.2	40.1	
Initial reading:	**6.5 in.**			
Soft package,	non-corrected reading, in.	13.9	17.8	
	corrected reading, in.	7.4	11.3	
Hard package,	non-corrected reading, in.	19.0	25.5	
	corrected reading, in.	12.5	19.0	
Difference		5.1	7.7	
% Difference		40.8	40.5	

Table 4
Typical Average Permeability Tester Readings on Commercially Wound Dye Packages

Initial reading: 7 inches
Orifice Diameter: .66 inches

Yarn		Manometer reading, in.	
Number	**Stock**	**Not Corrected**	**Corrected**
20/1	Rayon	10.9	3.9
24/2	Rayon	11.5	4.5
12/1	Rayon	11.5	4.5
12/2	Rayon	12.8	5.8
28/2	Rayon	13.8	6.8
36/1	Cotton	14.5	7.5
40/1	Cotton	15.6	8.6
30/1	Rayon	16.9	9.9
36/4	Cotton	19.5	12.5

Table 5
Effect of Permeability on the Physical Properties of 36/1 Carded Cotton Yarn

Initial reading: 7 inches
Orifice diameter: .66 inches

	Permeability Reading, in.						
	Not Corrected	Corrected	Yarn Wt. Range, oz	Yarn No.	Skein break, lb	Break Factor	Elong. %
BEFORE DYEING:							
Soft	12.9*	5.9	18.1-19.6	37.03	60.3	2227	6.4
Hard	18.7	11.7	19.6-21.2	37.57	59.0	2217	5.7
AFTER DYEING:							
Soft				36.14	61.8	2219	5.3
Hard				36.06	58.8	2120	5.4

* Each value represents 4 or more packages

Table 6
Effect of Permeability on the Physical Properties of 30/1 Viscose Yarn

Initial reading: 7 inches

	Permeability Reading, in.		Yarn Number	Skein break, lb	Break Factor	Elong. %
	Not corrected	Corrected				
BEFORE DYEING:						
Soft	13.1	6.1	30.67	70.8	2171	13.0
Hard	16.6	9.6	30.52	70.6	2150	12.8
AFTER DYEING:						
Soft			29.58	69.4	2053	14.6
Hard			29.44	67.6	1990	14.5

* Each value represents an average of 9 packages

elongation with results as shown in Table 5. Package dyeing caused a decrease in yarn number (increase in weight) and a decrease in elongation. There was also a significant decrease in break factor (product of yarn number and skein break) of the hard packages. The yarn in the hard packages had less elongation before dyeing than the yarn in the soft packages, indicating a loss in elongation during the winding of the hard packages. However, the hard packages lost less elongation during dyeing with the result that the overall loss in elongation was approximately equal.

Reasonable variations in package weights do not appear to affect the shade of a package except to change the permeability slightly which in turn might affect the shade. Variation in shade from lot to lot will vary if the average weight varies.

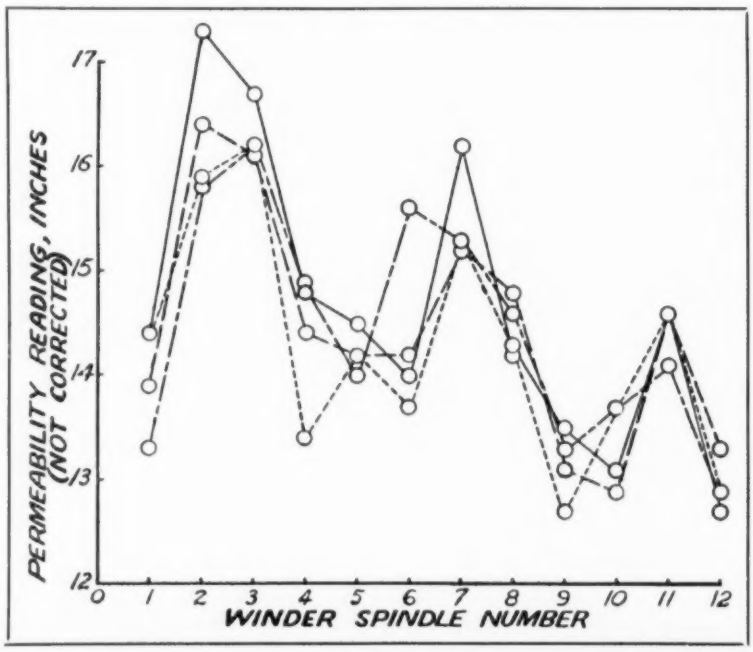
Another study was made on eighteen 36/1 carded cotton dye packages with corrected permeability readings ranging from 5.1 to 12.7. This study was made in order to determine the upper and lower limits of permeability readings for this particular yarn and color for level dyeing. After dyeing light blue, dye shades were present depending on the differences in package permeabilities. By observing all possible combinations of quills from these packages it was possible to arrive at four different permeability ranges as follows:

Range 1, 5.1 - 8.4
Range 2, 8.4 - 9.3
Range 3, 9.3 - 10.4
Range 4, 10.4 - 12.7

Packages with permeabilities within one of these ranges were the same as regards shade but were different in shade from packages of any other range. Packages with readings within Range 1 showed a tendency to be darker on the inside than did packages from the other ranges. Ranges 2 and 3 are too narrow for practical control work. Range 4 appears to be the most practical because it would be possible to control within a two-inch range and there is less tendency for the inside to be dark. These findings are specific regarding this particular yarn and color but should be useful in investigating other yarns and dyes.

Effect of Air Permeability on the Levelness of Shade and Physical Properties of 30/1 Viscose Rayon Yarn. Packages of low and

PERMEABILITY READINGS on 30/1 rayon dye packages taken from consecutive doffs off the same winder spindles.



high density were placed on dye stems of a package dyeing machine so that both density types were placed at locations on the top, middle, and bottom of dye stems and on different stems and dyed maroon. These packages were checked for shades within packages and between packages with the following results:

(1) Hard packages dye a lighter shade than soft packages.

(2) The outside of hard packages was darker in shade than the inside.

(3) The inside of soft packages was darker in shade than the outside.

These packages were conditioned at standard conditions before and after dyeing and tested for yarn number, skein break, and elongation with results as shown in Table 6. Package dyeing caused an overall decrease in yarn number, an overall increase in elongation, and a decrease in strength of the hard packages but did not cause any change in strength of the yarn from the soft packages.

Mill Control of Package Permeability. We have already noted that wide variations in package permeabilities will result in a variaton in shade of the dyed yarn. To eliminate this variation we may either grade all packages with the permeability tester or help the winding department to wind uniform packages. The first possibility would be too time-consuming to be practical. The second possibility shows promise as indicated in the accompanying graph.

The graph represents a plot of the permeability readings of four consecutive doffs of 30/1 rayon yarn packages from twelve winder spindles. With some exceptions there is close agreement between permeability values of each spindle from doff to doff. The agreement is very good, considering the fact that no attempt was made to eliminate any other variables. The exceptions will not give trouble if duplicate permeability checks are made.

As an illustration of how these tests can be of value to the winding department, we will assume that we wish to wind 30/1 rayon packages which have permeability readings between 14 and 16 inches (not corrected). Any two tests shown on the graph will tell us that spindles 2 and 3 are winding hard packages and that spindles 9, 10, and 12 are winding soft packages.

Cotton Fabrics Withstand Temperatures to 4500 F

A special chemical treatment for clothing which will not burst into flame even when exposed to the intense heat of a blow-torch was demonstrated in New York City recently by the Treesdale Laboratories and Textile Processing Company of Pittsburgh.

The demonstration, presented to a group of press, public safety, and textile officials at the Ambassador Hotel, illustrated a flameproof compound called "Permaproof 300," which when applied to cotton cloth provides a durable finish impervious to combustion even at temperatures up to 4500 F.

John A. Beattie, president of Treesdale Laboratories which developed the compound, explained that safety garments so flameproofed have been "road-tested" for the past five years at the Pittsburgh Works of the Jones & Laughlin Steel Corporation with "excellent results." They are now being used in other steel mills and industries where fire and intense heat are working factors, he said.

Mr. Beattie declared the process was applicable to a variety of other uses in addition to safety clothing, including cotton bed ticking and mattress covers, some upholstery and drapery fabrics, and "certain other items which annually run up huge fire losses" resulting from dropped cigarettes, lighted matches, and similar careless or accidental causes.

The Permaproof compound is impregnated into the fiber of the cloth during the final finishing process in a textile mill. J. F. McCarthy, research director of Treesdale, explained that only standard finishing equipment is required. The impregnant does not noticeably affect the porosity of the cloth, and it adds toughness by increasing the tensile strength and abrasion resistance. Mr. McCarthy reported that in actual service, the treated cotton garments have been outwearing conventional wool and other untreated fibers by as much as five times. He said there have been no cases of dermatitis reported either from handling the finish or from wearing the treated clothing.

ACKNOWLEDGEMENTS

Grateful acknowledgement is made to R. H. Baker, Jr., of Mooresville Mills for recognizing the need for a dye package permeability tester and for constructive criticism during the development period. Grateful acknowledgement is also made to Dr. O. W. Clark, Calco Chemical Division, American Cyanamid Company, for supplying blueprints of their installation for the measurement of air volume.

We'll see you at the

AATCC Convention, Chicago

Slogan—"American Achievement Today

THE FAMED "windy city" of Chicago is the setting for the 32nd National Convention of the American Association of Textile Chemists and Colorists on September 17, 18, and 19, 1953. Headquarters for the Convention are in the Conrad Hilton Hotel, the largest hotel in the world, located on Michigan Avenue opposite Grant Park and the lake front.

Sponsored by the Mid-West Section, this promises to be one of the most interesting gatherings for members of the AATCC and their families. On the Wednesday prior to the opening of the meetings, members have been invited to visit the plant of the American Institute of Laundering in Joliet, Illinois. Technical sessions have been scheduled for Thursday and Friday, with many papers to be presented by men prominent in the industry.

Hotel Reservations. For the first time in several years, all members and their wives can be accommodated in one hotel—the Conrad Hilton, which has 3000 rooms. Reservations must be made on the official registration forms, which are to be forwarded directly to the hotel. The committee will not reserve suites, however, and members desiring them should write direct to the hotel for reservations, stating that they are required for the AATCC Convention.

Entertainment. Because of all the things to do and see in Chicago, Thursday and Friday evenings and Saturday afternoon have been left open for this purpose. An information booth will be in operation next to the Registration Booth, and full particulars will be available. With each registration form there will be a brochure recommending various Chicago restaurants, also outlining activities for that week in Chicago.

The special daytime program planned for the ladies will include a cocktail party Thursday afternoon; Breakfast Club radio-television program, a home furnishings tour of the Merchandise Mart, and a luncheon and fashion show on Friday; and on Saturday a visit to the Planetarium. This year there will be a book of tickets available at $5.00 per person, covering all of these events.

Convention Program. Registration begins at 9.00 A.M. on Thursday, September 17, in the Exhibition Hall lobby, with a National Council meeting scheduled for 10:30 in the West Ballroom. The alumni luncheon and junior student paper contest will be held at noon, and the press luncheon at 12:30.

Technical sessions are scheduled for Thursday afternoon, with "Science Fibers" as the over-all subject; "Hosiery" and "Wool" will be discussed Friday morning; and "Cotton" and "Textile Auxiliaries" in the afternoon.

The Olney Medal Award luncheon is scheduled for Friday noon. Saturday morning is the Intersectional Contest, and the Speakers Reception will take place in the evening.

Transportation. Chicago is convenient to reach from all parts of the country, by rail, air, and highway. The principal airlines and railroads have been notified to anticipate increases in reservations for the Convention.

Technical Meetings Scheduled

Thursday, September 17:

2:00 P. M. Grand Ballroom
"Science Fibers"

1. "The Dynel 'Inner Structure'"
   C. A. Setterstrom, Carbide and Carbon Chemicals Co.
2. "Acetate Blends of Improved Performance"
   B. S. Sprague, Celanese Corp. of America
3. "Recent Advances In Dyeing Orlon Acrylic Fiber and Dacron Polyester Fiber and Blends of these with other Fibers"
   J. F. Laucius, E. I. du Pont de Nemours & Co., Inc.
4. "Laundering Properties of the Science Fibers"
   George H. Johnson, American Institute of Laundering

Friday, September 18:

9:00 A. M. South Ballroom
"Hosiery"

1. "Color Development and Its Relation to Fashion"
   Helen Sisson, Phoenix Hosiery Co.
2. "A New Method of Vat Dyeing of Hosiery"
   Robert D. Blum, Jr., May Hosiery Mills
3. "Woolen and Worsted Spun Yarn In Hosiery"
   Elwood W. Munz, Richard C. O'Brien
4. "How the System of Yarn Manufacturing, as well as the Fiber's Physical Properties, Affects the Characteristics of Yarn for Use in Half Hose"
   John B. Caron, Caron Spinning Co.

9:00 A. M. West Ballroom
"Wool"

1. "Practical Aspects of Wool Scouring"
   R. E. Wolfrom, Rohm and Haas Co.
2. "The Nature of the Modification of Wool by Various 'Chlorination' Processes and Their Effect on the Wear-Life of Shrink-Resistant Materials"
   Daniel Frishman, Harris Research Laboratories
3. "Application of Calcofast Dyes to Wool"
   Henry E. Nillson, American Cyanamid Co.
4. "The Dyeing Characteristics of Different Wool Grades"
   William F. Brommelsiek, Forstmann Woolen Co.

2:00 P. M. South Ballroom
"Cotton"

1. "Cotton—An Old Fiber with a New Future"
   Leonard Smith, National Cotton Council of America
2. "Better Mercerizing for Improved Luster"
   Arnold M. Sookne, Harris Research Laboratories
3. "The Behavior of Optical Bleaching Agents on Cellulosic Materials"
   S. N. Glarum, Ciba Co., Inc.
4. "The Practical Partial Acetylation of Cotton"
   Edmund N. Burns, Jr., Southern Regional Research Lab., USDA.

2:00 P. M. West Ballroom
"Textile Auxiliaries"

1. "New Silicone Finishes for Wool"
   F. L. Dennett, Dow Corning Corp.
2. "Absorption of Detergents in the Dyeing Process"
   Lester F. Hoyt, Allied Chemical & Dye Corp.
3. "Polyvinyl Pyrrolidone—A Versatile Compound with Textile Use Potential"
   E. C. Hansen, General Dyestuff Corp.
4. "Emulsion Polymers and Their Textile Applications"
   Leonard Shapiro, American Polymer Corp.
5. "Antistatic Finishes for Textiles"
   Mason Hayek, E. I. du Pont de Nemours & Co., Inc.

September 17-19

Challenges Comparison"

Exhibit. The entire exhibition will be held in the air-conditioned Exhibition Hall of the Conrad Hilton Hotel. Included will be displays by dyestuff manufacturers, chemical and resin manufacturers, machinery and laboratory equipment, also displays of new fibers and fabrics.

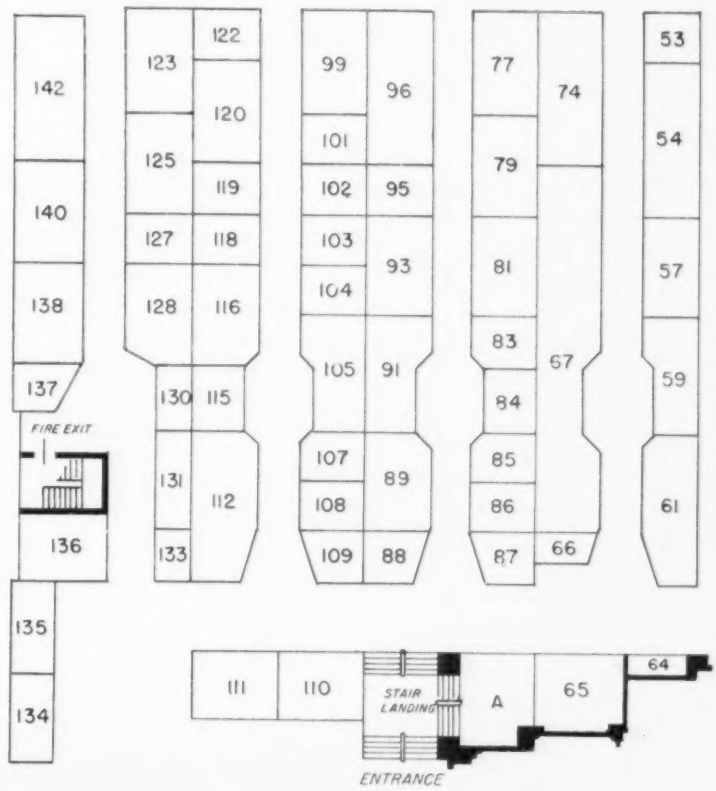
Hours are: September 17 and 18, from 10:00 A. M. to 10:00 P. M.; the 19th, 10:00 A. M. to 2:00 P. M. Exhibits will be set up on the 16th during the morning, and taken down the afternoon of the 19th.

Conrad Hilton Hotel ⟶

List of Exhibitors and Floor Plan of Exhibition Area

Below are listed all of the exhibitors who have contracted for space in the 1953 AATCC Exhibit, and opposite these you will find a floor plan, on which the various booth numbers have been indicated. With this list and plan, you will have no difficulty locating the exhibitors you are most interested in contacting. Be sure to include this show on your list of "MUSTS."

AATCC National Intersectional Contest Committee	54
AATCC Research Committee	61
AATCC Research Committee	67
National Aniline Div., Allied Chemical & Dye Corp.	112
America's Textile Reporter (Publication)	88
American Aniline Products, Inc.	89
American Bemberg Corp.	95
Calco Chemical Div., American Cyanamid Co.	123
American Dyestuff Reporter (Publication)	109
American Optical Co., Instrument Div.	53
Anderson Machine Shop, Inc.	136
Atlas Electric Devices	59
Bersworth Chemical Co.	77
Brush Electronics Co.	125
Carbide & Carbon Chemicals Co.	119
Ciba Co.	79
Custom Scientific Instrument	66
Daily News Record (Publication)	110
Dow Corning Corp.	83
E. F. Drew & Co.	101
E. I. du Pont de Nemours & Co., Inc., Dyestuff Div.	96
Encyclopedia Brittanica	111
Gaston Co. Dyeing Machine Co.	86
Geigy Co., Inc.	93
General Dyestuff Corp.	74
Glyco Products Co., Inc.	108
B. F. Goodrich Chemical Co.	102
Hilton-Davis Chemical Co. Div.	91
E. F. Houghton & Co.	135
International Salt Co.	104
Metro-Atlantic, Inc.	84
Midwest Section Courtesy Booth	A
Midwest Section Courtesy Booth	65
Midwest Section Courtesy Booth	103
Midwest Section Courtesy Booth	118
Midwest Section Courtesy Booth	127
Midwest Section Courtesy Booth	134
Modern Textiles (Publication)	130
Monsanto Chemical Co.	131
Morton Salt Co.	31
Nopco Chemical Co.	128
Owens-Corning Fiberglas Corp.	99
Pittsburgh Coke & Chemical Co.	142
Riggs & Lombard, Inc.	57
Sandoz Chemical Works	120
Scholler Bros., Inc.	116
Scientific Oil Compounding Co.	122
Seydel-Woolley & Co.	87
Textile Age, Inc. (Publication)	115
Textile Bulletin (Publication)	137
Textile Industries (Publication)	133
Textile World (Publication)	107
United States Testing Co., Inc.	138
Victor Chemical Works	140
Virginia-Carolina Chemical Corp.	105
Jacques Wolf & Co.	85



American Aerial Survey Co.

SETTLING BASINS are at right. In these 75,000-gallon basins raw effluents are stored and equalized, coagulated and chlorinated, and made ready for discharge into the municipal sewerage system.

Interested in Waste Treatment?

Read how Castle Creek Prints does it.

INDUSTRIAL growth throughout the nation has brought the problem of stream pollution into proper focus. Now it can be seen clearly how important the proper use of water is. Industry needs an unfailing supply of water, so industry must share the available water supply intelligently. This calls for returning process water to the streams in good condition, for others to use in turn. Mills fortunate enough to be able to discharge waste to municipal sewerage systems can lighten the burden of water conservation still further by pre-treating raw effluent.

By HERBERT BLANCHFIELD
Superintendent
Castle Creek Prints, Inc.

EXCLUSIVE

IN ORDER to dispose of its liquid wastes, Castle Creek Prints, Inc., of Washington, New Jersey, and its tenant, the Northern Dyeing Corporation, utilize a chemical coagulation, fill and draw system for the treatment of these wastes.

The raw effluents are allowed to run into two storage-equalizing basins, each having a capacity of 75,000 gallons. When these basins are filled, their contents are pumped to sediment basins. In the pumping operation, the effluent is treated with a coagulant (aluminum sulphate) and chlorinated.

The treated wastes are circulated in the settling basin where the coagulant forms a sediment with the solid portion of the liquid waste. Then, after a period of time, depending on the nature of the raw effluent, the supernatant is pumped by means of a float intake from the settling basin to the municipal sewerage system. Periodically, samples are taken to insure that the treatment has been complete.

Two or three times a year the sludge resulting from coagulation is pumped into a settling bed where the water is drained off and the sediment allowed to dry. This dry sediment is mechanically removed from the bed and dumped

Threat to Solution-Dyed Fabrics

"Unless consumers know what to expect from apparel and decorative items made of solution-dyed yarns, and receive ironclad assurances that claims made for them are valid, there is danger that certain inferior fabrics now beginning to appear on the market may put all solution-dyed merchandise in disrepute," Robert M. Schwarzenbach, president of The Schwarzenbach Huber Co., said recently in announcing that his firm is setting performance standards for the industry by submitting all of its solution-dyed fabrics to the Good Housekeeping Institute for testing and approval.

To help both the trade and consumers to identify its solution-dyed fabrics, Schwarzenbach has adopted the family name "Solu-Dye" (short for "solution-dyed"), which will be applied to all of its laboratory-approved fabrics, whether they are made of Tennessee Eastman's "Chromspun," Celanese's "Celaperm" or any other chemical firm's color-fast synthetic fiber, he added.

Trade advertising about the standards development and adoption of the "Solu-Dye" family name got underway last June.

A national advertising program aimed at consumers will be launched early this fall, with initial space scheduled for the September issue of "Good Housekeeping."

Schwarzenbach plain solution-dyed acetate taffetas have already received the Institute's approval seal, Mr. Schwarzenbach revealed, and will be heavily advertised at trade and consumer levels as being readily dry cleanable, non-water-spotting, and color-fast for the life of the fabric to sunlight, atmospheric fumes, perspiration, wet and dry crocking, and cleaning fluids. As the properties of Schwarzenbach's satins, twills, failles and other basic and novelty weaves are tested and approved, they too will receive heavy promotional treatment as part of the "Solu-Dye" line, he said.

"Because there is a variance between properties of the component yarns of which a fabric is constructed and the finished fabric itself," Mr. Schwarzenbach declared, "it remains for the weaver to set the pace in establishing standards of cloth performance in apparel, decorative materials, and other applications."

WASTE from the screen printing and dyeing operations is first discharged into one of two equalizing basins. Stored liquids are then drawn to settling basins by means of the float intake at center of photo, being treated with a coagulant and chlorinated in the process of pumping.

in town approved fills.

All operations have been timed in order to achieve active supervision during coagulation. The removal of waste to the municipal sewerage system occurs during the night time low-flow period.

The two major dyes used at Castle Creek are Indigosols and Rapidogens. Also used in the screen printing, bleaching, dyeing, and finishing processes are starch gums, urea, ammonium vanadate, sodium chlorate, gluconic acid, caustic soda, acetic acid, formic acid, hydrogen peroxide, various detergents, and soda ash. Equalizing and coagulation in Castle Creek's four basins have solved the problem of disposing of these wastes.

TREATED WASTES are circulated in the settling basin, shown here, where coagulation occurs. The supernatant is pumped out of this basin and discharged into the municipal sewerage line—usually at night when the town's disposal system is operating at lowest load.

Evaluation of Warp Sizes by

IT IS NOW POSSIBLE from statistical considerations to predict the time required to perform a weaving test in which it is desired to determine the presence or absence of a specified improvement in weaving efficiency. This paper presents an analysis of data to estimate how extensive a weaving test need be to evaluate a new size.

THE STATE of the weave room has a profound effect on the economics of a modern textile mill. How efficiently the looms operate will be determined by many factors, but particularly by the size formula and sizing process employed. Sizing research and development have already produced very satisfactory sizes in most cases, and large improvements in weaving efficiency by the introduction of new sizes should not be expected. Even small improvements, however, could represent a large dollar saving, and new fibers and fiber blends often require new sizing procedures for effective weaving.

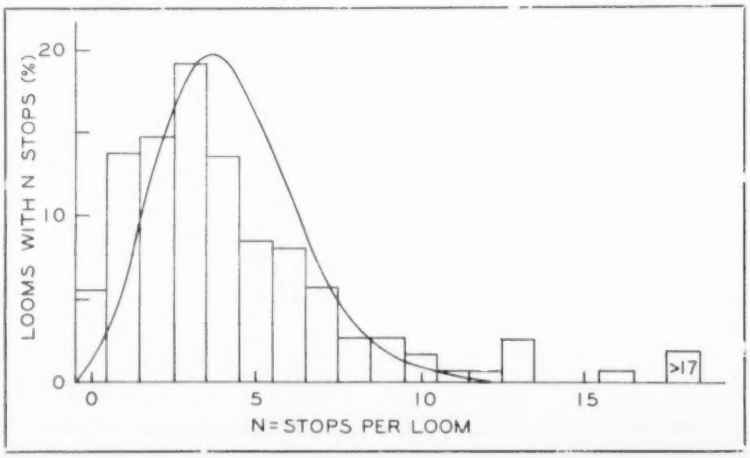
The final evaluation of the effectiveness of a new size must be made by a mill trial. Analyses of weave room studies have appeared in the English literature, but these studies are not strictly applicable to American manufacture because of the difference in type of loom used. Corresponding American studies have not been reported.

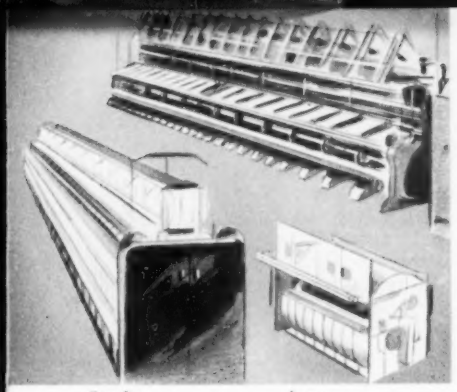
This paper presents an analysis of data collected from a representative cotton mill under conditions of normal operation. Nine weavers each operated a set of approximately 28 looms with stoppage rates of about 0.5 warp stops per loom-hour and about 0.9 total stops per loom-hour. The fabric being woven was 40 x 39 plain weave cotton.

The data from this test were analyzed to estimate how extensive a weaving test need be to evaluate a new size. The importance of the proper length of test is obvious: if it is too long, it is unjustifiably expensive; if it is too short, it may yield inconclusive or erroneous results.

Results. The distribution of loom stops in an eight-hour period is shown in Figure 1, in which the height of each vertical bar indicates the per cent of looms, with the number of stops shown at the base of the bar. The continuous curve in Figure 1 shows the distribution which would have been obtained had the stops occurred

FIG. 1. Distribution of warp stops in an eight-hour period.





Studies Assays

Loom Tests

The tenth article of a series dealing with research work and the practical application of research findings in the mill.

By R. K. TONER*

EXCLUSIVE

as perfectly random events. That such is not the case is evident; the peak of the random curve is to the right of the observed maximum, i.e., some looms showed less stops than would be expected. On the other hand, an appreciable number of the looms had stoppage rates considerably above the expected number.

Although the data fail to follow the random distribution curve the properties of the random curve can still be used with the observed data to design weaving tests for more general situations than that from which the data were obtained. One thing immediately evident is that a test based on observed data will be longer than one which follows a random distribution curve, since the departure from randomness cannot be theoretically anticipated.

The Method and Its Application. Table 1 has been calculated on the basis of 0.5 warp stops per loom-hour and 0.9 total stops per loom-hour. The first column in the table is the percentage decrease in warp stops which is significant for the length of test shown in the remaining columns. If the observed decrease in warp stops is less than this figure, the test has not demonstrated the superiority of the new size. It is also true, however, that one cannot claim an appreciable superiority of the present size. In other words, from the statistical point of view, the test has not been conclusive.

On the other hand, an observed decrease greater than the figure in the first column is probably due to the superiority of the new size. If the decrease is markedly greater than the significant figure, it means that the test has been carried on longer than necessary.

A numerical example can best illustrate the use of this table. Assume that an economic appraisal indicates that the adoption of Size B will be feasible if it reduces the warp stops by 30% compared to those obtained with Size A. From the second column of the table opposite the figure 30 there appears the number 581, the total loom-hours in the weaving test if only warp stops are to be counted, i.e., 290 hours each for tests on Sizes A and B. If at the end of this time only 24% reduction in stops has been observed, Size B has not been shown to be significantly better than Size A; i.e., it is possible for this reduction to be accidental, just as it is possible to toss a coin and have it come up heads more than 50% of the time. However, it is highly unlikely that a figure of 30% can be exceeded in a test of 581 hours unless there has been an effect due to the size, providing, of course, that no other changes in operation have been introduced.

The problem can be stated in another way. A test of 580 hours has been run—two 290-hour tests on each of two sizes. A run-down of the second column of Table 1 shows that opposite 581 in the first column is 30%. If the number of warp stops measured is less than 30% of the former number, the test is not conclusive. If the reduction is much greater than 30%, say 50%, then the test has taken too long. A stoppage rate reduction of 50% would be significant for a test of only 2 x 185 or 370 hours.

Conclusions. Several important conclusions may be derived from this study. In the first place, it is now possible from statistical considerations to predict the lengtn of time required to perform a weaving test in which it is desired to determine the presence or absence of a specified improvement in weaving efficiency. Second, if the improvement is expected as a result of change in warp size, it has been shown that it is highly advantageous to count only warp stops instead of total stops; compare the figure in the third column of Table 1 with that in the second. Finally, the length of test is greater than would be required if the stops followed a random pattern; compare the second and fourth columns.

Precaution. Due consideration should be given to the statistical aspects of the problem. Table 1 was calculated for an average case. Random fluctuations may give rise to entirely erroneous conclusions, and a size of real value might be discarded or a poor one accepted.

NOTE: This paper is a condensation of a part of the doctoral thesis of T. F. Evans, formerly a member of the staff of Textile Research Institute.

TABLE 1

Significant Decrease in Warp Stops Observed, %	Total Loom-hours Required in the Weaving Test if		
	Only Warp Stops Counted	Total Stops Counted	Random Pattern and Only Warp Stops Counted
5	24,000	55,500	12,000
10	5,840	13,680	2,920
20	1,382	3,330	691
30	581	1,440	290
40	308	789	154
50	185	489	92
100	31	104	16

*Consultant, Textile Research Institute, Princeton, New Jersey.

Bleaching of Dacron Polyester Fiber

It is usually considered unnecessary to bleach "Dacron" polyester fiber. Where mixtures of Dacron and other fibers must be bleached, any bleaching procedure which is suitable for the other fiber should be satisfactory for the Dacron. Dacron has excellent resistance to oxidizing agents and is not degraded appreciably by the bleaching treatments normally used on other fibers.

Where fabrics made from Dacron are stained or discolored during processing, it may be advisable to bleach them. Bleaching treatments, however, are not always effective in removing certain types of stains, particularly oils and greases. In some cases bleaching may "set" stains in the fabric so that they become more difficult or impossible to remove by other methods. For this reason a stained or discolored fabric should be scoured before bleaching. In some instances it may also be advisable to spot or dry clean the fabric prior to scouring and bleaching.

Of the various bleaching agents which have been tested on fabrics made entirely from Dacron, sodium chlorite (Textone) in an acid bath seems to be the most effective for removing most types of stains and discolorations. A method often used on stained or discolored Dacron is as follows:

1. Bleach at the boil for about 1 hour in a bath containing 1.5 lb. of Textone bleaching agent and 1.5 lb. of 61% nitric acid per 100 gallons of solution. (Textone bleaching agent is sold by the Mathieson Chemical Corporation, 60 East 42nd Street, New York 17, N. Y.)

2. Drop bath, rinse, scour for about 30 minutes in a bath containing a detergent and an alkali, and rinse again.

To avoid corrosion of equipment, this bleach formula should be used in #316 stainless steel. Care must be used in handling of Textone since chlorine dioxide is liberated during the bleaching step. This bleach-method should be used only when adequate ventilation is available.

Heavy, tightly constructed, and other types of fabrics, which may present wrinkling or stitch distortion problems, should be bleached on a jig or other equipment which will hold the fabric flat and free of wrinkles.

Stains and discolorations can often be removed from combination fabrics containing Dacron with sodium chlorite, peracetic acid, sodium hypochlorite, hydrogen peroxide, sodium perborate, or other bleaching agents. The type and concentration of all ingredients in the bleach bath, and the time and temperature of the treatment will largely depend on the other fibers present in the fabric. To avoid damage, carefully control these factors.

Any bleaching procedure should be tested under actual conditions of use before adoption on a commercial scale.

From Du Pont Preliminary Bulletin CSB-D-11, "Bleaching of 'Dacron' Polyester Fiber."

Wot Hoppen?

If you said that when you saw this photograph, you weren't the only one. The same question was asked by a TI editor when he saw this sports jacket on display at a Dow Corning Corp. press conference.

To indicate the trend in new silicone treatments under development, the left half of the jacket was treated with a new wool stabilizing finish developed in the Dow Corning laboratories. The other section was not treated. Both were given the standard military wash test: One hour at 140 F in a rotary wheel washer, followed by five minutes extraction and 30 minutes in a tumbler dryer at 135 F.

The nap, press, and lining of the treated section were obviously affected, but there was practically no shrinkage. The untreated half, however, shriveled up almost beyond recognition.

New Colour Index Available in 1955

The American Association of Textile Chemists and Colorists has announced the publication in 1955 of the second edition of The Colour Index, a joint project that has been in work since 1945 with the British Society of Dyers and Colourists.

This edition will be made up of five volumes totalling 2,100 pages. It will deal with 5,000 dye entities and 25,000 commercial names with groups relating to their main usage, e.g. Acetate, Acid, Azoic, Direct Pigment, etc. The data included will comprise the commercial name, manufacturers' initials, method of application, fastness properties, established usages, reactions on the fiber, and literary references relating to application. A hue classification has been made by reference to a hue indication chart. It contains data relating to chemical constitution, method of preparation of the dyes, patent and literature references relating to manufacture or constitution, solubilities and reactions of approximately 3,800 dyes and pigments.

For this second edition, the AATCC has announced a prepublication price in a single payment of $85.00 before September 1, 1953; a three-payment plan starting before the same date at $31.00 for each payment; and a final price on publication in 1955 of not less than $99.00.

Consider these factors when

Making Household Linens

from cotton, linen, viscose, and blends

By T. HARGREAVES
Caldwell Linen Mills

EXCLUSIVE

THE ADVENT of man-made fibers has made the textile industry put on its thinking cap. Man-made fibers have a definite place in the textile field today. The manufacturer must first study the physical properties of each of the types of synthetic fibers, in order to ascertain which of them will best suit the purpose for which his line of goods is intended.

Some synthetic fibers are very absorbent; others are practically non-absorbent. Some have great power of recovery from elongation; others will snap rather than stretch. Some have a high degree of resistance to abrasion; others have poor resistance. Some dye and bleach very easily; others resist the dyer's efforts. These and other comparisons must be studied very carefully in order to ascertain which of the synthetic fibers is most likely to suit each weaving or knitting mill's requirements.

Let us take the field of household linen. The word linen today does not mean that only linen yarns can be used. Linen, cotton, and man-made yarns are used these days. Dish towels, kitchen towels, glass towels, bath towels, bed sheets, and table cloths are all known as household linen.

Cloth Characteristics. What are the chief characteristics of such goods? The primary essential is that of utility. The so-called linens must be strong, hard wearing cloths that will withstand all the abuse of hundreds of launderings. Such cloths must also be highly absorbent. Their working duty is to quickly absorb the surplus moisture from washed dishes or glasses. Bath towels should easily and quickly absorb the water from the hands and body. Table cloths should be able to quickly absorb spilled liquids, before such spillings can harm the finish on the table top. Bed sheets should absorb body moisture.

Linen yarns answer these purposes well. Linen has good abrasion resistance, good absorbency, and also launders well with very little shrinkage. Very little lint shedding makes linen excellent for polishing fine glassware. Linen yarns also have a high luster, both when new and after repeated launderings. In bath towels their hard wearing and absorbent properties are offset by their harsh feel and a certain roughness. Linen bath towels are not as soft to the human skin as most people desire. Special qualities of linen bath towels (terry weave) make ideal friction cloths for use by masseurs or turkish bath users.

Linen yarns are difficult to spin and weave. The progress made in recent years in spinning cotton and some man-made fibers has reduced the costs of these as compared to the cost of spinning linen yarns. This has made linen yarns high in price, compared to cotton and viscose. There is still no doubt that for certain cloths, linen is still the best material. The public, however, spends only a small part of income for the purchase of household linens, consequently there is a huge demand for a cheaper form of "household linens."

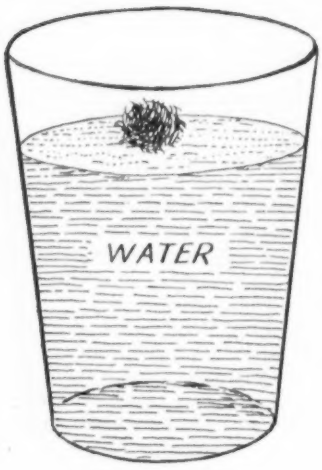
Cotton is cheaper and easier to process in spinning and weaving, and for many years "household linens" have in fact been "household cottons" although the trade still designates them as "household linens."

The man-made fibers that are available today are proof of progress in the field of textiles. First we had linen, then cotton substituted for it in the household linen trade. Viscose, which is one of the oldest of man-made fibers, is now substituting for both linen and cotton in the field of household linens.

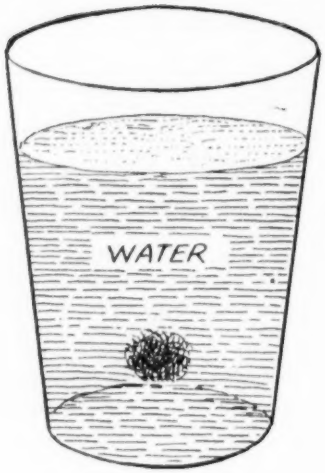
Absorbency. The manufacturer of some of these household linens can easily make a few tests to determine the absorbency of the various yarns. Take a glass of water from the nearest faucet. Roll a yard length of linen yarn into a ball, and drop this onto the water in the glass. The linen yarn will quickly absorb the water and almost immediately will sink to the bottom of the glass. Try this procedure with an equivalent count and length of cotton yarn. The cotton yarn is very slow to absorb the water, and quite a considerable time will elapse before it will sink to the bottom of the glass. Now try the procedure with an equivalent viscose yarn. The viscose yarn is very highly absorbent. It will sink to the bottom of the glass very rapidly. In order of absorbency, viscose is first, linen a close second, and cotton is third (see sketches on the next page).

Add a few drops of a wetting-out chemical agent such as "Nekal" to the water in the glass. Now put the three types of yarns to the water-plus-Nekal test. The cotton yarn will now quickly absorb this chemically treated water and sink as rapidly as the linen, which also will equal the viscose. By the use of wetting-out agents the three types of yarns are practically equal in absorbency.

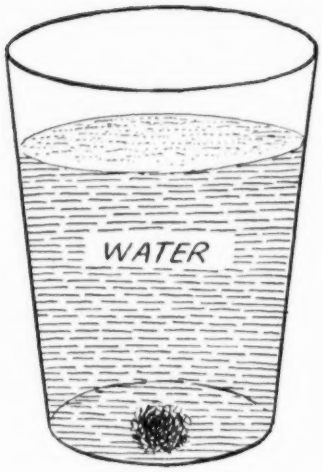
We have found that linen is highly resistant to abrasion, but has very little elasticity. In the



COTTON
Low Absorbency



LINEN
High Absorbency



VISCOSE
Very High Absorbency

process of winding, warping, and sizing, hardly any noticeable yarn stretch occurs. Consequently very little shrinkage occurs in width of yarn spread in reed to woven cloth width. Also very little shrinkage occurs when the cloth is put through a wet finishing process. Furthermore, numerous launderings hardly cause any appreciable shrinkage.

Spinning. Linen is difficult to spin. The yarns have many thick and thin places. This is especially noticeable in "tow" linen yarns. The tow linen types of yarns are often used in kitchen and bath towels. The finer types of linen yarns are used for the finer double damask tablecloths and napkins.

The prevalence of thick and thin places in the linen yarns, plus very little elasticity, causes difficulties for the weaver. The threads break more often. Many of the larger lumps at the thick places often deflect the shuttle in its flight across the loom. This will break warp threads and cause shuttles to fly out of the loom. Also, the thick places get stuck in the heddle eyes and reed dents, and undue strain on such threads causes a break at the thin place on the thread, which is usually very near to the thick place.

Ballooning. Linen yarns also balloon excessively in processing. This is prevalent in winding filling and in the creel of the warping machines. Speeds must be kept low, or some method found to control excessive ballooning. Excessive ballooning also causes two or more threads to lash together and cause trouble.

The speed of the slasher cylinders must be regulated to suit the non-stretching linen threads if the drying cylinder is positively driven. The front roller of the headstock should have a smaller circumference, compared to the roller required in running cotton yarns. This to compensate for less stretch in linen yarns.

Our search is now for some other yarn that will substitute for linen. Cotton is cheaper, easier to spin and weave, and is durable. Although cotton does not absorb moisture nearly as well as linen, it can be made to do so by applying chemicals. Viscose is cheaper than linen, and is equal to linen in its natural ability to absorb moisture. The usual types of viscose yarns are generally much too fine to replace linen yarns. Viscose yarns do not have good abrasive qualities, and furthermore they are weaker when wet. Cotton, on the other hand, increases in strength when wet.

Our search suggests that a blend of viscose and cotton staple, spun on cotton spinning machines, should provide an ideal substitute for linen yarns. Such a blend will be far better than cotton yarns for the cloths used in household linens. The usual linen counts for these goods are: 16s, 20s, 25s, and 30s. These equal 5 ¾s to just finer than 10s in cotton counts. Therefore, we need a type of viscose in cut staple to blend with a type of cotton suitable for spinning 6s to 16s cotton counts.

We now have our basic substitute yarns. Most spinners have solved the difficulties of carding and spinning blended viscose staple and cotton staple on the usual cotton spinning machines. We must now determine what proportion of viscose staple to that of cotton staple is ideal for the weaving of household linen cloths. The proportion of blend established as standard should be rigidly maintained.

Dyeing. Variations in the amount of one fiber in relation to the other will present very annoying and costly dyeing problems. These dyeing problems will occur in either yarn dyeing or piece dyeing. Care should be exercised by the spinner to prevent wrong blending. The spinner may use light shades of easily removed fugitive tints and readily identify the blends he is spinning. The type of fugitive tint used is important. If not easily removable the tint will cause trouble in subsequent

bleaching.

The winding, warping, and sizing departments must also be careful not to mix blended yarns with other blends or natural yarns.

A piece of viscose-cotton blended yarn, piece-dyed in vat colors, will show up badly if it contains cotton yarns mixed in the fabric by mistake. Cotton threads will show up as a very light shade, and the viscose-cotton blend will have a much deeper tone by comparison. This is because the more absorbent viscose-cotton blend yarns take most of the dye. The cotton threads are robbed of their share of the dye, and appear a light shade with hardly any depth of penetration.

This effect leads to the assumption that weaker dye baths will dye viscose-cotton blend cloths equal to the shade on an all cotton cloth, but this is not true. Viscose-cotton blends require a stronger dye bath to obtain the same shade as an all cotton cloth. What really happens is that the dye has a much deeper penetration on viscose-cotton blends than on cotton alone. In terms of volume, the deeper penetration means dyeing more bulk, thereby requiring more dye stuff.

These facts point clearly to the vital importance of the spinner in preserving the true blend formula.

Winding presents hardly any problem when changing from all cotton yarns to viscose-cotton blend yarns.

Dyeing Cheeses. The dyer, however, has a problem if he is dyeing yarn on hollow cheeses. The tendency of all viscose yarns is to swell when saturated. This is true to some extent in dyeing viscose-cotton blend yarns. To overcome this trouble the winder should employ less tension, or slower speed, to produce softer wound dyeing cheeses. These softer wound cheeses allow for the swelling and enable the dyer to get full penetration of the cheeses during dyeing.

Warping does not present any serious problems when changing from cotton to viscose-cotton blends.

A problem occurs at the slasher. There is much greater stretch when sizing viscose-cotton blends than with cotton, and the take-up rollers must be adjusted accordingly.

Size Formula. The sizing formula required is different from that used on cotton yarns. The starch content for a specific volume of water can be reduced 15 to 25 per cent for viscose-cotton blends as compared to the requirements for cotton. This again is due to the greater absorbency of the viscose-cotton blend yarn. Because of this greater absorbency, the total of starch solids absorbed into the blended yarn by sizing will be equal to that absorbed by an equal weight of cotton. This is true despite the fact that the viscosity of the size was reduced by taking out 15 to 25 per cent of the starch by weight. The cost of sizing is not reduced. The sizing formula was adjusted to suit the change from cotton to viscose-cotton blends.

Weaving. Weaving presents problems connected with the calcu-

Mills Install Automatic Overhead Loom Cleaners

Several fine goods weavers, primarily on combed cotton work, have installed automatic traveling overhead loom cleaners serving part of their looms, and at least one mill has considered the investment worthwhile enough to go ahead with installation for the entire weave shed. Overhead cleaners have also been used in mills processing staple fiber.

For the present, the equipment is being used in mills which are able to maintain lower relative humidity (see TI, Apr. 1953, p.154).

The automatic air cleaners blow loose lint from the arch, harnesses, warp, cloth, beam, and drop wires, reducing the accumulation which normally would cause loom stops and bad cloth.

Use of the automatic cleaners is said to reduce greatly the cycle of blowing-off by air hose and is effective from employee morale standpoint because the looms stay cleaner, especially when they are thoroughly cleaned while the warp is out. Furthermore, the weavers are not disturbed by the usual interference of the hose blowing-off operation and its accompanying temporary efficiency reduction and disagreeable condition.

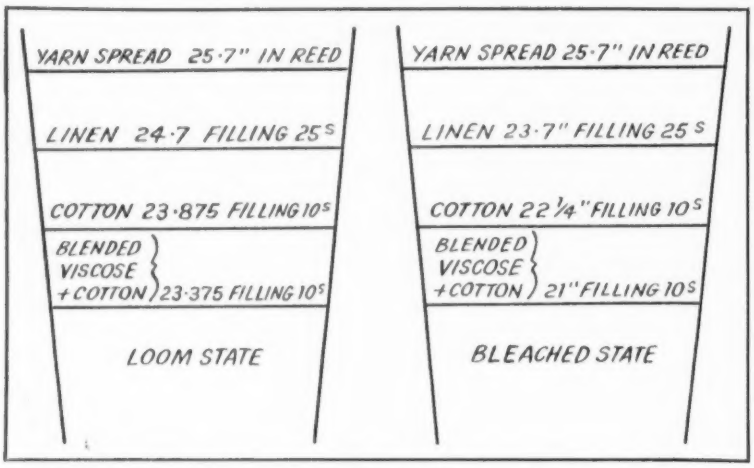
One of the initial experiments with overhead air cleaning was reported in the July 1950 issue of TEXTILE INDUSTRIES.

The economics of overhead cleaning were discussed in an open forum meeting of the Southern Textile Association in April 1951, when a mill man reported:

"It is purely a question of economics. We made an investigation of cost of cleaning [conventional methods] and found that it varies greatly from mill to mill. Total costs are reported as low as $10 per loom per year to as high as $200. The higher cost is in the fine yarn mills. We think overhead cleaners could warrant the first cost if cleaning costs are over $30-$40 per loom per year. . . there is no question but that they will work — certainly to some extent. It is a question of balancing the investment with the reducing of cleaning costs after they are installed."

A survey of weave room cleaning practices by conventional methods in ten print cloth mills appeared in the January 1952 issue of TEXTILE INDUSTRIES. The survey covered frequency of blowing-off looms, rate of blowing-off, additional duties of loom cleaners, cleaning when the warp is out, frequency of sweeping, cleaning filling grates, and cleaning overhead fixtures.

Some observers believe that with effective use of overhead cleaners, in conjunction with thorough cleaning of the loom by hand during warp-out, or by adequate vacuum system to remove loose lint under looms during operation, weave rooms of the future will be much cleaner and reduction in cleaning costs can be effected.



RECOVERY CHARACTERISTICS of linen, cotton, and cotton-viscose yarns are illustrated here.

lations for determining the yarn spread in the reed to produce the cloth width desired in the loom state. This loom state or grey width should suit the calculation for shrinkage in bleaching, dyeing, or finishing.

Linen stretches very little during winding, warping, and sizing.

Cotton stretches less than viscose-cotton blends, but much more than linen.

Linen can be stretched very little and has poor recovery from elongation.

Cotton stretches more than linen and has good recovery characteristics.

Viscose-cotton blend yarns stretch much more than cotton yarns during winding, warping, and sizing. These blends have unusually good recovery characteristics.

Recovery characteristics affect yarn spread to cloth width calculations.

A plain cloth is woven from a yarn spread in reed of 25.7"

Using 25s linen weft filling, the loom state cloth width is 24.7"

Using 10s cotton weft filling, the loom state cloth width is 23.875"

Using 10s viscose-cotton blend filling, the loom state cloth width is 23.375" (see accompanying illustration).

When these three cloths are bleached and finished they will shrink farther. The 25s linen filling shrank from yarn spread to loom state cloth width, 1 inch. The 10s cotton shrank from yarn spread to loom state cloth width, 1.825 inches. The 10s viscose-cotton blend shrank from yarn spread to loom state, 2.325 inches.

This brings the 25s linen filling cloth to about 23.7 inches wide bleached and finished. The 10s cotton filling cloth is about 22¼ inches wide bleached and finished. The 10s viscose-cotton blend filling cloth is about 21 inches wide bleached and finished.

No change was made at the loom. The shuttle and the tensions in the shuttle were the same for all three types of filling. The warp was 10s cotton and one loom produced all three cloths. Then what accounts for the difference in the widths of the three cloths? The same length of filling yarn was laid across at each pick; namely, 25.7 inches.

Actually 25.7 inches of filling yarn were not laid across at each pick. The 25s linen filling which has practically no elongation had 25.7 inches length at normal state laid across at each pick. The 10s cotton filling had 25.7 inches of stretched filling laid across at each pick. Possibly the normal length was only 25 inches. The 10s viscose-blend filling had 25.7 inches of very highly stretched filling laid across at each pick. Possibly the normal length was only 24 inches.

The quick recovery of viscose-cotton blend yarns in getting back to normal took place as soon as the cloth was relaxed from the loom temples. More shrinkage took place because of this recovery from elongation to normal length.

Where then did the yarn receive that amount of elongation by stretch? The stretch was received during the process of winding onto the filling bobbin. In the endeavor to produce well wound, fully packed filling bobbins that will not sluff off, the yarns are wound under tension. The winding machines also run at high speed. Inertia in winding also increases tension, and the yarns are stretched in proportion to the elasticity of the threads. Viscose-cotton blend yarns being stretched the most; cotton was next; and linen hardly stretched at all.

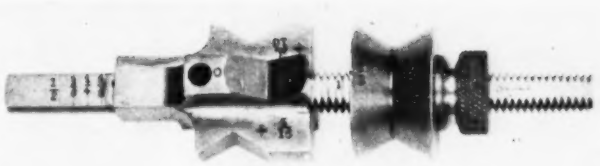
So long as the filling remains on the tightly wound weft pirn it cannot recover from the elongation caused by winding. Also the speed of the shuttle in the loom, plus the tension on the filling in the shuttle, maintains the elongated condition of the filling. It is possible that high loom speeds may even increase the elongation of the filling yarn.

Knowing these factors, the cloth designer and the cost department can adjust their calculations to accommodate the characteristics of the viscose-cotton blend yarns.

If we were not acquainted with all-cotton yarns and had been "brought up" with viscose-cotton blends, those shrinkages would appear normal. We would not be worried because one shrinks more than another. We are likely to blame the yarn; whereas we should adapt ourselves to changing conditions and new blends.

Selvages may give a little trouble when using viscose-cotton blend yarns. In heavy or tight weaves, the selvages may crack or curl. The selvages may shrink more than the body of the cloth. This problem may be the result of overstretching the warp threads in the tighter construction of the selvage weave. When the cloth is bleached, the wet condition induces the threads to shrink back to normal. The tight weave restricts this shrinkage, and cracks and curls become evident. The remedy is either to thin out the warp ends in the reed at the selvage, or use different yarns for the selvages.

Laundering presents a problem,



Handy Roll Setting Gauge

To save time in setting rolls on drawing, roving, and spinning frames, the illustrated gauge was recently developed by the Bureau of Plant Industry Miniature Spinning Laboratory at the University of Tennessee Agricultural Experiment Station, Knoxville.

To operate, the cylindrical notch is rotated along the threaded shaft, which is calibrated in sixteenths of an inch, and then locked at the desired fiber staple length. The rolls are then set, using the four fixed notches which give spacings of staple length plus 0, 3/16, 5/16 and ½ inch. An additional fixed spacing may be obtained by sliding the fixed notches to the needed length as marked along the shaft.

Change in Wool Top Standards Proposed

The U. S. Department of Agriculture has proposed changes in Official Standards of the United States for Grades of Wool Top that would add one new grade and would simplify grade specifications and put them on a measurement basis for all 14 grades.

Department officials stated that the changes are being proposed only after thorough consultation with the industry, primarily the American Society for Testing Materials.

The proposal would add one grade (54's) to the 13 grades now included in the standards. In addition, the specifications for the lower grades (48's to 36's) would be changed from the present physical or visual basis to a measurement basis similar to that for the higher grades. Sub-standard classifications for grades 80's to 50's would be eliminated, with slight additional revisions in the standard specifications for these grades. The specifications for all grades would be simplified by reducing the specific requirements from five to six measurements in the case of some grades down to four for each grade.

Interested persons will have until November 20, 1953, to submit views and comments on the proposed changes in wool top standards. These should be sent to the Director, Livestock Branch, Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Day and Evening Textile Courses at Rutherford, N. J.

Fairleigh Dickinson College at Rutherford, N. J., will open its day and evening courses on Sept. 16, 1953.

The college offers a two-year textile day course leading to an associate arts degree; also, a four-year chemistry day course with textile option, leading to a bachelor of science degree. Scholarships and grant-in-aid assistance are available. For complete catalog and application blanks, write to the Registrar.

Evening courses on the following subjects will be offered this fall: raw materials; dyeing; yarn and cloth manufacture; identification, analysis, and testing; textile chemistry.

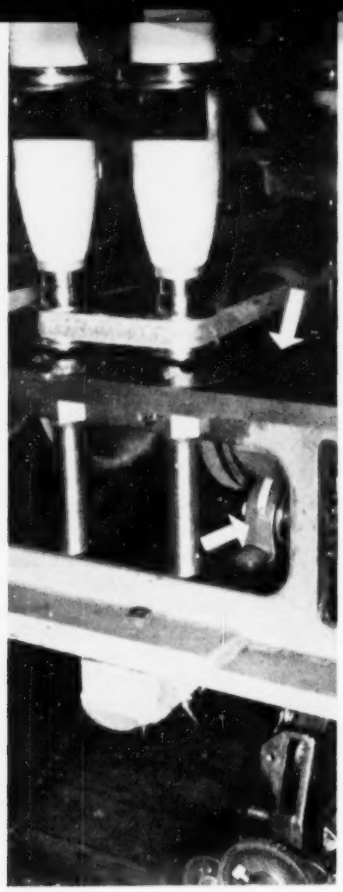
especially on short length goods such as towels and sheets. The tendency is for cloth made from viscose-cotton blend yarns to shrink more than cotton cloth. The remedy is to avoid heavy pressure or tension in the finishing processes. If too much pressure or tension is permitted, the yarns will be stretched again, and the laundering will bring them back to normal. The resultant effect may appear to be excessive shrinkage.

We assume that viscose yarns swell when being dyed. It may be more correct to say that the stretched yarn shrinks back to normal length on the dye package. Elongation of yarns makes them thinner. When shrinking back to normal length, as they do when wet, the yarns assume their normal thickness and at first observation may appear to be swollen. The water content will naturally swell the viscose a little but that happens also with cotton yarns.

Possibilities. A 50-50 yarn of tow linen fiber blended with viscose cut staple, by the pin drafter method, should produce a good yarn for weaving kitchen towels. Such a yarn should spin easier than linen alone. It should, by the introduction of viscose staple fiber, have less thick and thin places than with 100% linen. Consequently, it should be easier to weave. Possibly a big increase in looms per weaver could be effected. The yarns should be much cheaper than all-linen.

Whether such a blend of viscose-linen tow would dye well should be ascertained. If not, the colored stripes of kitchen towels could be of viscose-cotton blend yarns, or all-cotton yarn, as now exist in linen kitchen towels. Whether the blending of an easily stretched fiber like viscose with an almost stretchless fiber like flax, would produce a yarn with ideal elongation properties, would have to be determined.

RINGS WERE CHANGED from 2¼" to 2¾" with an increase in bobbin capacity from 4¼ ounces to 8½ ounces. Traverse was increased from 7½" to 9½".



OUTRIGGER BEARINGS were installed on the camshafts to eliminate lost motion in the builder mechanism.

Alabama mill modernizes 1918 model frames to

Boost Spinning Production 22%

Staff Prepared

EXCLUSIVE

ONE large Alabama mill has converted 1918 model spinning frames to larger packages to increase warp spinning production. The frames formerly were 3¾" gauge and had 2¼" rings, 8" bobbins, and old type plain-bearing spindles with four-roll H&B long draft. They operated at 70% efficiency.

Officials of the mill had the frames changed over to Meadows drive with Whitin SKF sleeve-type spindles and 10⅜" APT warp bobbins, employing a combination wind. Upon putting the frames back into operation, production improved from 70% to 92% because of the longer running time and less stoppage for doffing.

Before the change was made, approximately 15% more power was required to operate the machines; however, the major saving was in doffing costs and winding costs in view of additional yarn on the package after the changeover. The change was made as a result of normal efforts to improve efficiency in the mill which was already running normal production at normal cost.

Larger Package. The 2¼" rings were changed to 2¾" rings with an attendant increase in bobbin capacity from 4¼ ounces on 2¼" rings and 8" (7½" traverse) bobbins to a maximum of 8½ ounces on 2¾" rings and 10" (9½" traverse) bobbins.

Mechanical changes included outrigger bearings installed on the cam shafts to eliminate lost motion in the builder mechanism. One thrust bearing was put on each end of the vertical worm shaft of

Formal Grievance Procedure Advocated for White Collar Employees

Mounting unrest among white collar employees, especially those employed in the offices of manufacturing companies, is foreseen by the Research Institute of America unless industry sets up some kind of formal procedure to meet the needs of this group. A survey recently completed by the Institute's associate membership division shows that most companies have no grievance procedure of any kind for clerical workers "in spite of the fact that their white-collar people gripe just about as much as their production workers."

The problem stems, the Institute says, from a widely held belief among white collar executives that they and their subordinates operate as "a small family group," and that white collar employees would resent formal grievance procedures as a slight to their occupational status.

As a result of this attitude, the Institute found "a less systematic disposition of white collar problems and consequently a greater accumulation of discontents." With proper remedial steps, however, the Institute believes that there is no reason why the situation of white collar people should not be just as good if not better than that of "their brothers in the shop. The very fact of easier communications with supervisors and higher management people is a great potential asset."

Nylon Goes to the Ball Game!

Baseball fans who have sat behind home plate in Milwaukee's recently completed stadium say they like the nylon net stretched in front of the grandstand to protect them—it gives them a better view of the game since the cord from which it is made is less than half as large in diameter as that utilized in ordinary netting used for this purpose.

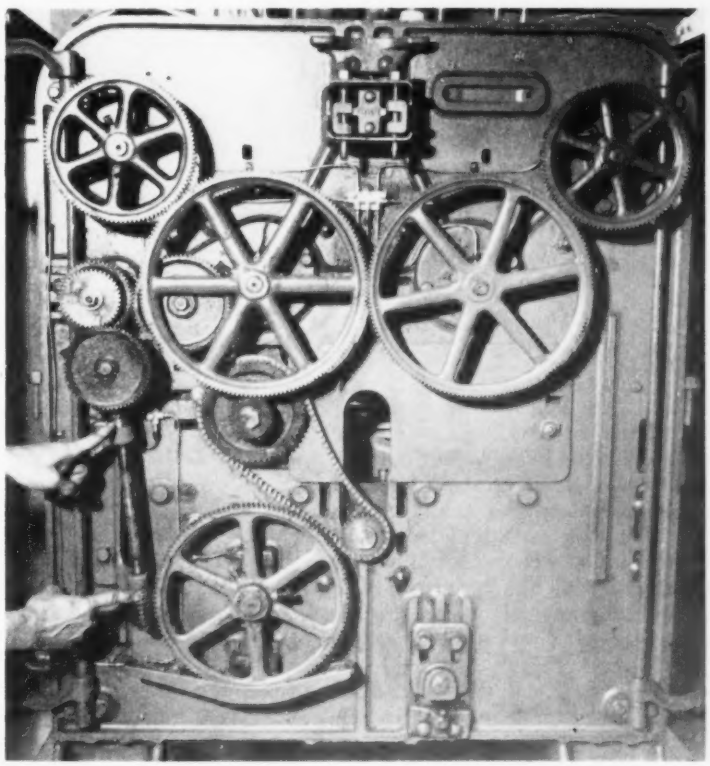
Other advantages are afforded by the nylon net too. Less time is required to take it down when no game is scheduled for several days. The nylon net weighs only 190 pounds, whereas the ordinary net weighs 395 pounds; its pull strength is 120 pounds, compared with 96 pounds for conventional netting. The nylon netting is the same as that used by commercial fishermen to haul in the big ones and is guaranteed not to rot, even if stored while wet.

Made by R. J. Ederer Co. of Chicago, Ill., the net is fastened at the foot of the press box and slopes to 10-foot poles on the ballfield; a second net hangs vertically from the poles. The main net is 72 feet in length, 92 feet wide at top and 56 feet at the poles. It is dark brown in color, this having been selected as best for blending with the background on the grand stand.

the builder to eliminate lost motion at this location. These bearings eliminated virtually all lost motion at the dwell.

Cost Amortized. Each frame will be amortized, by increased production and other savings, in approximately five years, according to the management in this mill. The mill is now spinning 7s to 20s yarns on the converted frames. Cost of the changeover was approximately $13 per spindle, and the change was made by mill personnel, although Meadows Manufacturing Co. supplied the necessary parts for the conversion, except spindles and tubes.

Spindle speed is now 8000 rpm. and traveler speed is 5750 feet per minute. Formerly spindle speed was 8000 rpm, and traveler speed was 4725 feet per minute.



THRUST BEARINGS were put on each end of the vertical worm shaft of the builder to eliminate lost motion at this location.

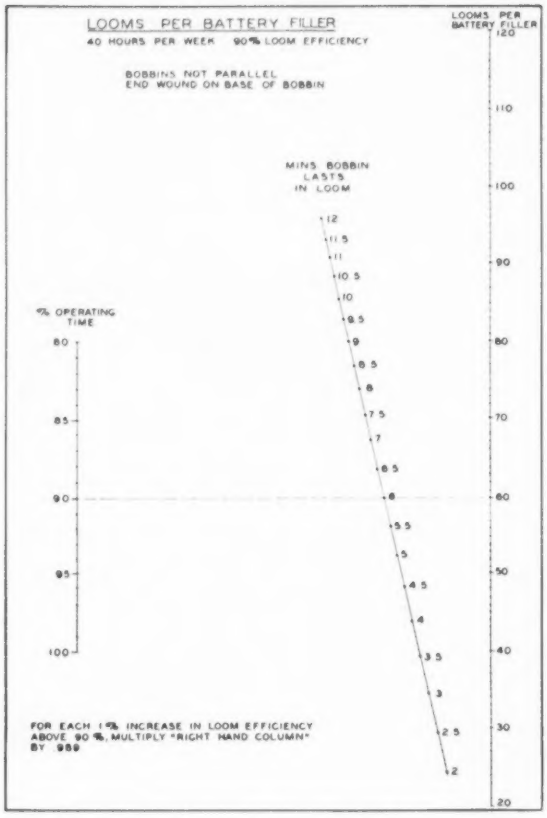

LOOMS PER BATTERY FILLER
40 HOURS PER WEEK 90% LOOM EFFICIENCY
BOBBINS NOT PARALLEL
END WOUND ON BASE OF BOBBIN
LOOMS PER BATTERY FILLER
MINS. BOBBIN LASTS IN LOOM
% OPERATING TIME
FOR EACH 1% INCREASE IN LOOM EFFICIENCY ABOVE 90%, MULTIPLY "RIGHT HAND COLUMN" BY .989

FIG. 1. 90% loom efficiency is the base; for each 1% increase in loom efficiency above 90%, multiply Looms per Battery Filler by .989. Looms are on feelers, no refills. Time to put bobbin in battery is .10 minute, which includes walking time from loom to loom, walking for supply of bobbins ahd putting them in large picket, and bobbins have the yarn wound around the base.

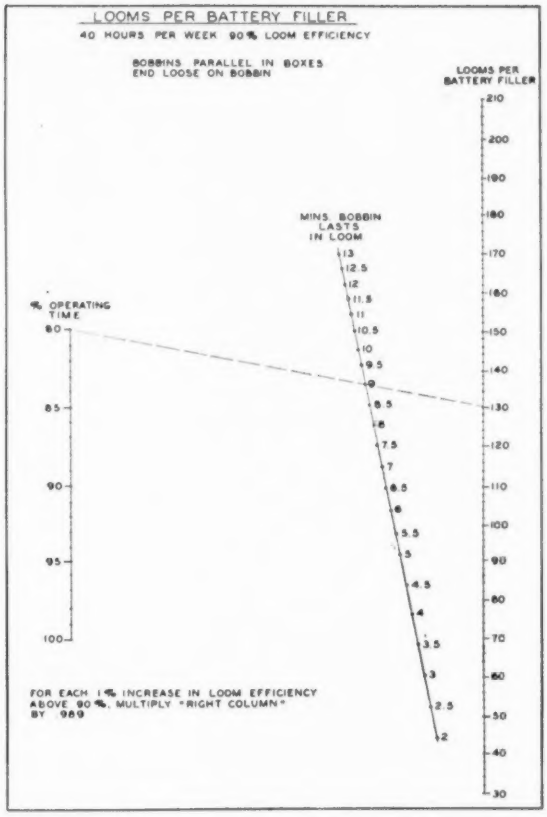

LOOMS PER BATTERY FILLER
40 HOURS PER WEEK 90% LOOM EFFICIENCY
BOBBINS PARALLEL IN BOXES
END LOOSE ON BOBBIN
LOOMS PER BATTERY FILLER
MINS. BOBBIN LASTS IN LOOM
% OPERATING TIME
FOR EACH 1% INCREASE IN LOOM EFFICIENCY ABOVE 90%, MULTIPLY "RIGHT COLUMN" BY .989

FIG. 2. 90% loom efficiency, looms changing on feeler only, no refills. Multiply by .989 for 1% increase in loom efficiency. Filling is laid parallel in boxes and yarn is not wound around base of bobbin, so no unwinding of yarn. Time to put bobbin in battery is .055 minute, which includes walking from loom to loom and changing boxes of filling to small trucks used by battery filler.

Another slant on the

Battery Filler's Job

By JOHN E. ALLEN

EXCLUSIVE

THE ABOVE nomograms for the battery filler's job should be of interest because they quickly show the effect of the length of bobbin run in the loom on the number of looms the battery filler can handle when the quills are picked up by the operative in a random manner as compared to being supplied to her in an arranged manner.

The nomograms shown in Figs. 1 and 2 are for looms per battery filler at various % Operating Times (working time with rest time deducted) along with different lengths of time the bobbin runs in the loom. Operating Time of 80% indicates that the operative has 20% rest time, or is expected to work 1920 miuutes of every 2400 minutes.

Both nomograms are prepared for 90% loom efficiency, but Fig. 1 is based on random delivery of bobbins with the end wound on the base of the bobbin; whereas Fig. 2 is for bobbins that have been laid out for the battery filler parallel in boxes, and ready for insertion in the battery. Neither nomogram takes into consideration the refills or replacement of pieces knocked into cans but which must be put back into the batteries.

How Nomogram Works. Re-

ferring to Fig. 1, a 6-minute running bobbin at 90% Operating Time shows that a battery filler could take care of 60 looms (lay straight edge so that it crosses 90% Operating Time, 6 Mins. Bobbin Lasts in Loom, which then intersects 60 Looms per Battery Filler). Now suppose that the time the bobbin lasts in the loom drops to 5.5 minutes: by placing the straight edge on 90% and through 5.5 minutes, the reading on the straight edge is 55 looms, instead of 60 as previously shown. Broken line on chart indicates how this example works.

Working another way, if the straight edge is put on 60 looms and through 5.5 minutes, it shows that the Operating Time is 98.2. One can readily see that although the bobbin runs only 30 seconds less, it means that the battery filler's job is overloaded by five looms and that the rest time is only 1.8% (100-98.2) or not enough. This can only result in higher loom stoppage while waiting on filling.

This one example, however, shows the importance of getting all possible yarn on the package.

Less yarn on the bobbin could be caused by a number of factors, including doffing spinning frames in rotation, as some doffers do, slower frames, excessive end breakage, variation in picking of builder motion, and too open lays.

From a comparison of the two nomograms, one may also see what can be done by giving some thought to handling of materials. For instance, in Fig. 1 where the bobbins are tossed in the box and the yarn is wound around the base of the bobbin, it may be seen that with a bobbin lasting nine minutes at 80% Operating Time a battery filler could take care of 80 looms. Fig. 2, which is based on arranged bobbins and yarn loose on the bobbins, with the same nine-minute bobbin at 80% Operating Time a battery filler could take care of 131 looms. Broken line in Fig. 2 shows how this example works.

The time averages for both nomograms were taken from averages of a number of mill time studies. Such nomograms could be used as the basis for setting up jobs once the rest time is set and the loom efficiency is known.

"How to Raise Cash and Influence Bankers"

The rise in prime loan rates to 3.25% finds alert businessmen searching for new sources of financing. The range of possibilities is unexpectedly broad, as revealed in a new study, "How to Raise Cash And Influence Bankers," by Arthur H. Richland. The study, which is published by Business Reports, Inc., Roslyn, L. I., N. Y., analyzes some 15 different sources of raising operating money today.

Mr. Richland's starting point is to take a hard look at a business to see why it needs cash and what can be accomplished with additional cash. This points up the kind of money needed—short term turn-over money, or long term money, borrowed money or additional equity capital. Such self-analysis puts the businessman in a good position for talking to the prospective lender, whether it be his own bank, an insurance company, a pension fund, a foundation or endowment fund, a factor or finance company, an underwriter or risk capital syndicate. The study shows what each of these groups will do on inventory loans, equipment loans, on accounts receivable, on unsecured credit, on plant and real estate. It tells how much of a company an underwriter will want and how much to let him have. How accounts and inventory can be turned into quick working cash to extend the financial capacity of many businesses is shown.

Special attention is given to new sources still in a comparatively early stage of development. Factoring, for instance, is a source of money all too often overlooked. Purchase leasebacks are another growing method of financing whereby the company sells its plant or land to an institution—usually an insurance company—then simultaneously leases it back for a long period with generous renewal options.

A third new source of financing today lies in the spread of "closed-end" non-regulated investment trusts and private venture syndicates.

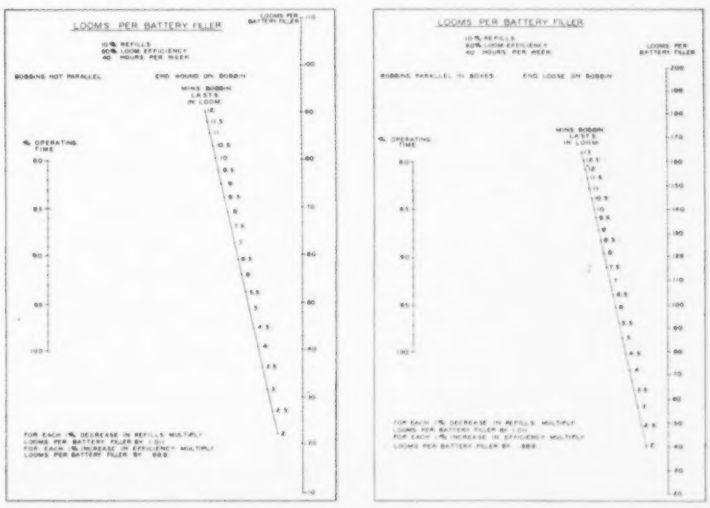


FIG. 3. These two nomograms are adaptations of Figs. 1 and 2 on the opposite page, being modified to take into consideration the fact that the battery filler has to handle 10% refills. The nomogram on the left is for a loom efficiency of 90%, bobbins not parallel, and ends wound on bobbins; right, 90% loom efficiency, bobbins laid parallel in boxes, and ends loose on bobbins. For each 1% decrease in refills, multiply Looms per Battery Filler by 1.011. For each 1% increase in loom efficiency, multiply Looms per Battery Filler by .989.

Check this article for $$$$$-saving

Materials Handling Methods

that might be applicable in your mill

By JOHN E. HYLER
EXCLUSIVE

EVERY textile mill constitutes a subject for improved materials handling methods and equipment studies. No two mills are alike, although they may use the same manufacturing machinery, and the solution to a materials handling problem in one mill may be entirely inapplicable in another.

Two details which should be considered in planning materials handling are: how much labor is to be expended in the operations; and how much and what type of equipment is to be used.

Lower costs, safety, and efficiency are basic factors involved in considering installation of materials handling equipment in the mill. This article offers a review of current installations, alternatives, practices, and attendant details worthy of consideraion, especially in view of current labor costs.

IN A STUDY of materials handling methods in the textile industry, one finds that practically each mill maintains a law unto itself with regard to finding the most economical and efficient means of moving stock in process, finished goods, and other items essential to its operations.

For instance, not all textile mills operate a boiler plant, but many do. Whether the boiler plant is operated to obtain steam for generating power, to obtain processing steam used in dyeing, bleaching, and finishing operations, or both, the problem of coal and ash handling is present. Since labor costs are now high, it is found more and more expedient to provide for mechanical handling of coal and ashes.

One cannot go into this at length, because the subject is endless; however a considerable number of textile mills find it wise to store coal in a silo. Coal can be delivered into such silos from the hopper dump by means of a bucket elevator. Such an elevator usually provides as economical a means of handling coal as is readily to be found for power plants of the size and capacity found at the average mill.

A bucket elevator is also well suited for lifting ashes from the ash pit to a storage bin, at sufficient height to allow them to be loaded into truck or railroad car by gravity. In a few instances, something a little more elaborate may be required in the way of coal and ash handling equipment. Whatever the problem may be, it may be easily worked out by those who install such equipment.

Influence of Specific Mill Layout. It is usually wise to make a careful study of the individual mill and its specific problems, instead of trying to apply any general materials handling rules. However, certain things are always in line with good engineering practice. So far as it may be possible, where multiple-floor buildings are involved, lighter portions of the work should be done on the upper floors. This means that lighter-weight machinery should be located on upper floors, and heavier machinery below. Study will show that following this rule as far as practicable will reduce volume of materials handling. This, together with the general rule of avoiding manual handling as far as possible, provides one good standard to be continuously observed.

In general, winding machinery is of lighter weight than slashers, warpers, looms, and other equipment used in subsequent operations. In many instances where winding operations are performed on upper floors, considerable use may be made of the force of gravity in feeding materials downward to the lower floors, thereby avoiding cost for power.

Boxes may be routed down ordinary gravity-roll conveyors where possible to arrange for a low angle of fall. Otherwise, spiral gravity rolls, or ordinary spiral chutes may be employed. As far as consistently possible, routing materials from lower to upper floors should be avoided. To the extent that it may be necessary, push-bar conveyors may be employed, in addition to other types of elevating equipment.

It is seldom necessary for operatives to climb up on tiers of bales in warehouses where a sufficient amount of thought has been given to handling. Portable elevators are found convenient in many instances for elevating cotton and other bales to heights where they may readily be slid into place. Power-type trucks, so often seen fitted with forks, can be and in various instances are equipped with special bale clamps which enable them to pick up,

1

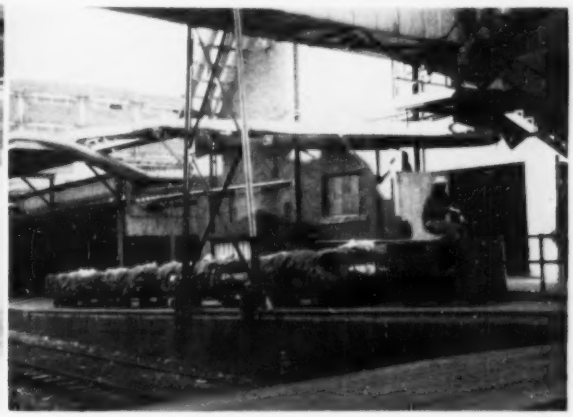
MOBILE ELECTRIC ELEVATOR of hinged type stacks bales of cotton ceiling high.

2

SPECIAL CLAMP handles two bales of cotton simultaneously on power truck.

3

CONVEYOR SYSTEM used for handling raw wool at Bell Company mill in Worcester, Mass. System incorporates multiple-strand chain conveyor shown here; also a 36" flat-top horizontal belt conveyor 195 feet long extends through the warehouse. A power-driven live-roll conveyor is used, and finally a 12-foot-long hinged, adjustable, multiple-strand chain transfer conveyor at the warehouse end. The adjustable section of conveyor is equipped with photo-electric cells for raising or lowering it for oncoming bales.



4

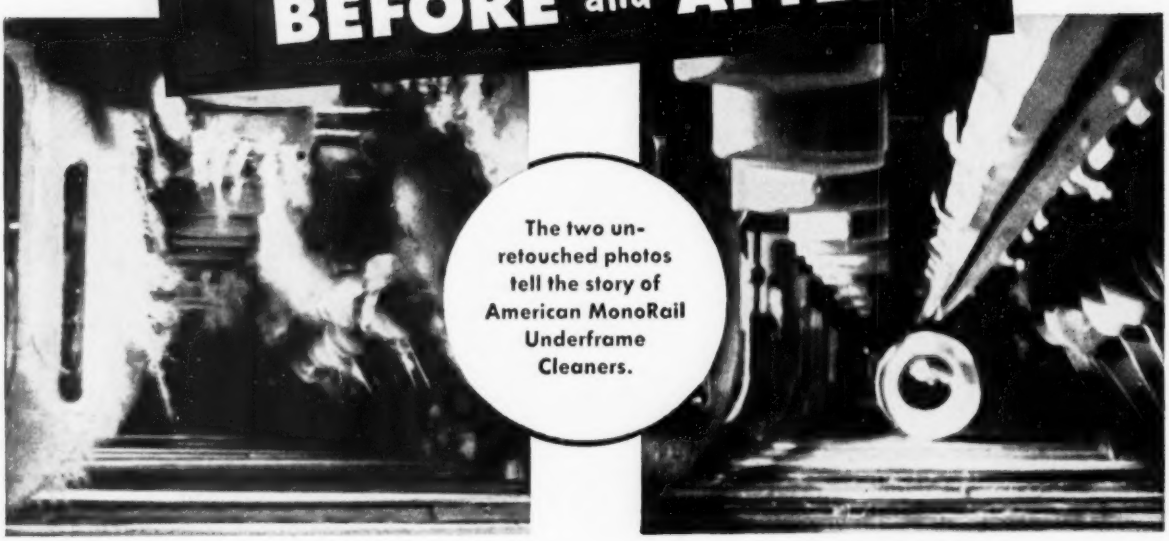
TRACTOR AND FIVE TRAILERS haul raw cotton from warehouse to mixing rooms at Cone Mills Proximity Plant, Greensboro, N. C. Each trailer carries four 500-lb bales comprising a 10,000-lb load handled by the one-man tractor train. Fork trucks are employed to load and unload the trailers. This tractor and a fleet of trailers serve 15 cotton warehouses at Proximity, handling many thousands of tons of raw cotton, cotton waste, and processing materials.

transport, and stack bales readily. Some clamps have been designed for use on trucks which will pick up and transport two bales at a time.

Conveyors Serving Storage. In mills where their use seems to be indicated, there is no reason why some type of mechanical conveyor cannot be employed to transport bales to and from storage. Multiple-strand chain conveyors, belt conveyors, and power-driven live-roll conveyors have all been used singly or in combination, as need appeared for such bale transportation.

In one instance, a hinged, adjustable, multiple-strand chain transfer conveyor, twelve feet in

BEFORE and AFTER



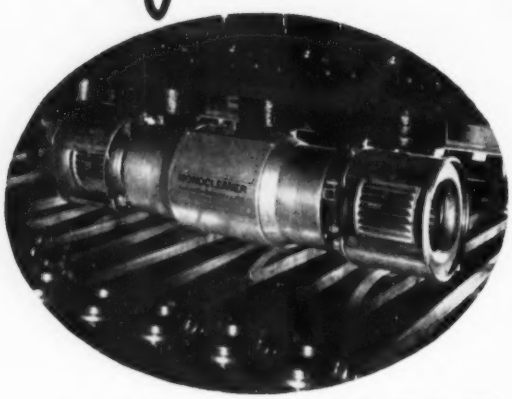
The two unretouched photos tell the story of American MonoRail Underframe Cleaners.

Photo above is from a cotton mill making low number yarns. It illustrates normal operating conditions. Lint has gathered and has formed into streamers ready to be carried by the tapes toward the spindles. The frames required cleaning by air hose every four hours.

Here is shown a spinning frame in the same mill which operated for thirty days with the American MonoRail Underframe Cleaner. No "blowdown" was required. Compact design of the cleaner unit makes it possible to operate within this confining area, keeping all parts thoroughly clean.

AMERICAN MONORAIL

Underframe Cleaning



With Underframe Cleaning—

One mill reports 80% reduction in blowdown time.

Another 75% cleaner yarns.

Another 30% reduction in seconds.

In addition to the above advantages, the constant removal of fluffy lint helps to prevent the possibility of flash fires thereby eliminating much of the common fire hazard in mills. Why not have the American MonoRail representative give the complete story. Write us today for copy of Bulletin UF-1.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**

length, at the warehouse end of a system of conveyors, is provided with an arrangement of photo-electric cells for raising or lowering this end of the conveyor when an oncoming bale intercepts the light ray. This layout was particularly designed and installed for handling bales of wool.

Trackless trains, consisting of a tractor pulling a number of trailers, are sometimes employed for transporting bales to and from the warehouse. In one mill, fork trucks are employed to load and unload the trailers. At another mill, a tractor and a fleet of trailers serve fifteen cotton warehouses.

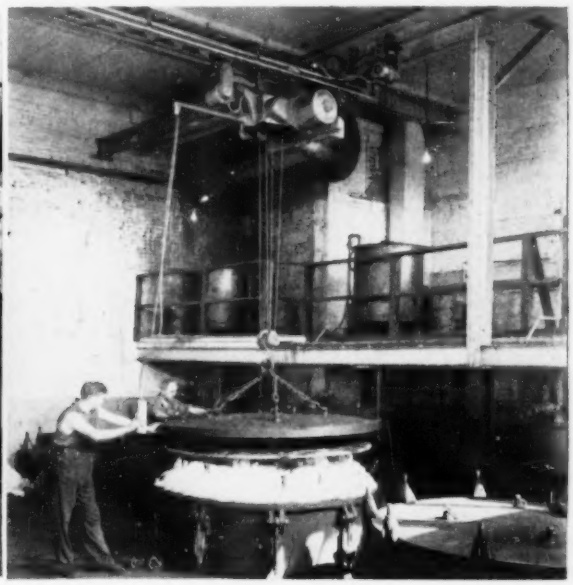
On the other hand, individual power-lift trucks are often used for transporting coils or bales of material as required. Power trucks are versatile. If there are times when they are not needed for handling bales, they may be used to advantage for handling bobbins, salt, starches, or other items.

Materials Handling Review

Tramrails and suitable tramrail cranes are often employed in modern materials handling in departments dyeing raw stock, as well as for many other purposes. Dyehouse handling methods have been improved along with other aspects of textile-mill handling. Some dyehouse trucks are now available with convex bottoms,

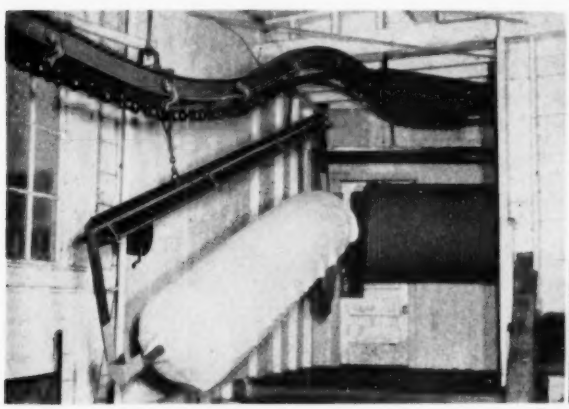
5

LOW-LIFT PLATFORM TRUCK transports coils of fiber from temporary storage to carding machines. This truck may be used as a rider type truck or as a walker type, and it is powered.



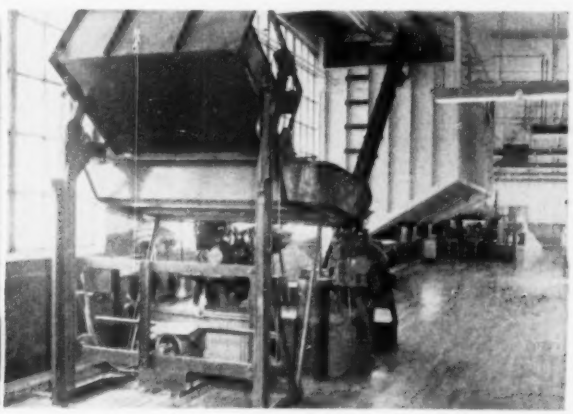
6

MONORAIL-TYPE CRANE used to handle material in raw stock dyeing department at Statesville Cotton Mills, Statesville, N. C. The crane has a capacity of three tons and is completely motorized.



7

OVERHEAD TROLLEY CONVEYOR at the Felters Company, Millbury, Mass., transports 90-lb felt bats from cards to hardeners and storage room. The conveyor is 462 feet long and is equipped with variable speed drive.



8

BOX HOIST delivers bobbins into hopper of bobbin cleaning machine. Conveyor employed for elevating cleaned bobbins to storage may be seen in the background on the far side of the bobbin cleaning machine.

"YOUTH SERUM"

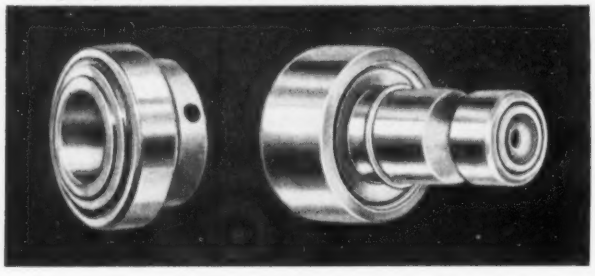
for TEXTILE Bearings

Injection relubrication . . . that's the "Fountain of Youth" for textile bearings. Developed by New Departure, this system revitalizes the sealed-in lubricant and makes it equal to the fatigue life of the bearing.

"Youth serum" (oil) is easily administered by a metering "hypodermic" oiler, equipped with a hollow needle, which can be inserted through the seal without danger of dirt getting in, or the lubricant running out.

New Departure originated the Sealed-for-Life bearing which permanently bars the elements causing abrasive wear—the number one enemy of all bearings. Teamed with the relubrication-injection device, New Departures are able to reduce maintenance and assure peak performance in hundreds of textile applications.

Shown are two New Departures designed for textile use. Adapter Bearing, left, has felt closures on both sides. Horizontal Tape Tension Pulley Bearing, right, operates on any plane up to and including vertical.

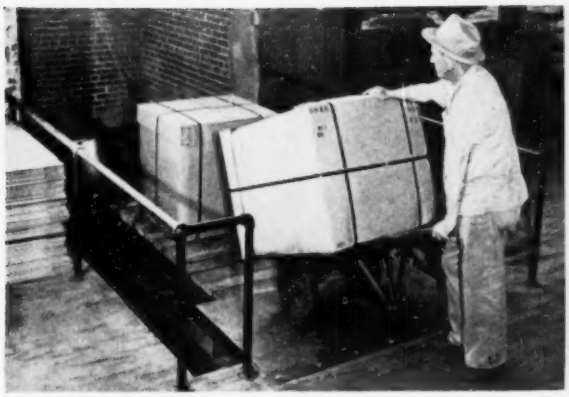


NOTHING ROLLS LIKE A BALL

NEW DEPARTURE

BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT
Also Makers of the Famous New Departure Coaster Brake



9

APRON CONVEYOR employed to transfer corrugated packing cases of finished yarn through a tunnel, under a railroad track, from plant to warehouse at Avondale Mills, Sylacauga, Ala.

10

LIGHT TRAMRAIL CRANE and hoist loads a 500-lb package dyeing machine. The yarn carrier with dark-colored packages on extractor at right side is also handled by the crane.

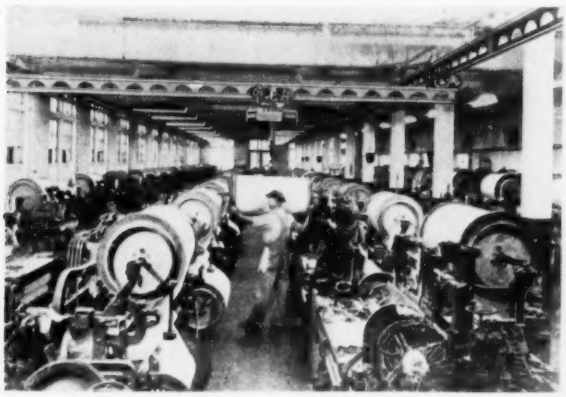
and are made of stainless steel.

The advantage of a convex bottom lies in the fact that liquid flows to a center point under the truck, where it is discharged. As a result, it does not reach the feet of a truck operator. Wet feet, discomfort, and illness are thereby avoided. Instead of needing to stand clear and toss material into a truck, resulting in soiling or damaging fabrics, operators may approach the truck very closely without any danger of wet feet.

Lap Handling Methods. The time honored method of handling laps from picker room to carding machines is to use special lap trucks. This is still a good method where the haul is not too long. Picker lap trucks, made of all steel-welded construction, are superior to old-time wood trucks and can be made to handle from six to eight laps. Some of these trucks may be easily maneuvered and loaded on one side or both, remaining perfectly balanced. Comber lap trucks, allowing ready transportation of from 12 to 15 comber laps without piling stock, are frequently employed and have no wood in their construction.

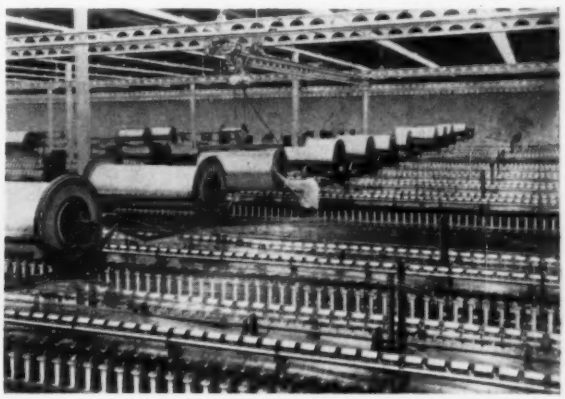
Where picker laps are traversed over a considerable distance, overhead conveyor handling is likely to be found much more economical. In some instances, overhead carrying systems are so arranged that laps may be made to travel a considerable portion of the distance by gravity, though power is always available on overhead chain conveyor systems to whatever extent it may be needed. Special holders are arranged for carrying laps on any such system. In some instances, material leaving carding machines is also handled by overhead chain conveyors, and this is often found advantageous.

Fork-type trucks are used in a considerable number of throwing



11

OVERHEAD TRAMRAIL CRANE handles beams in the weave room at the Richland Plant of Pacific Mills, Columbia, S. C. Whether the loom creels are high or low, one man with a tramrail crane can readily load them.



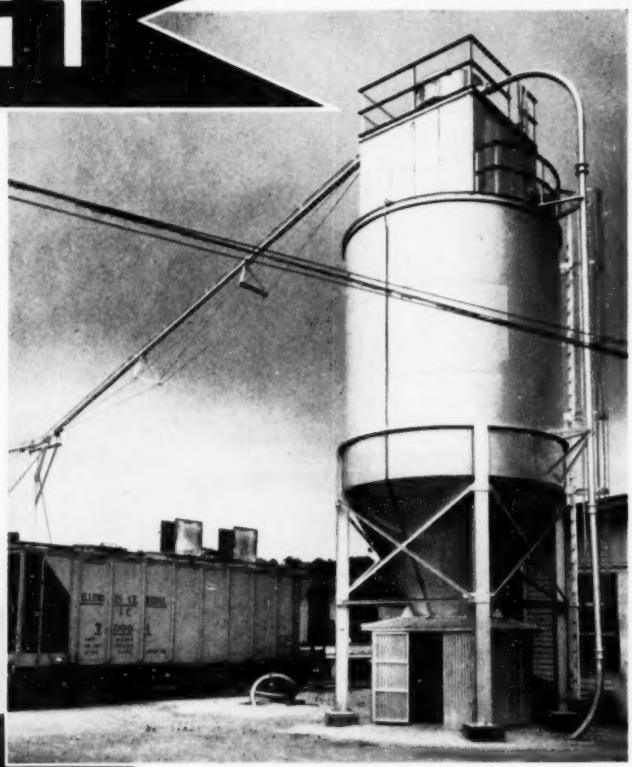
12

TRANSFER BRIDGE CRANES fitted with electric hoists, may be moved manually, and the cranes provide complete beam handling service for the entire twister room at Plant No. 2 of Excelsior Mills, Clemson, S. C.

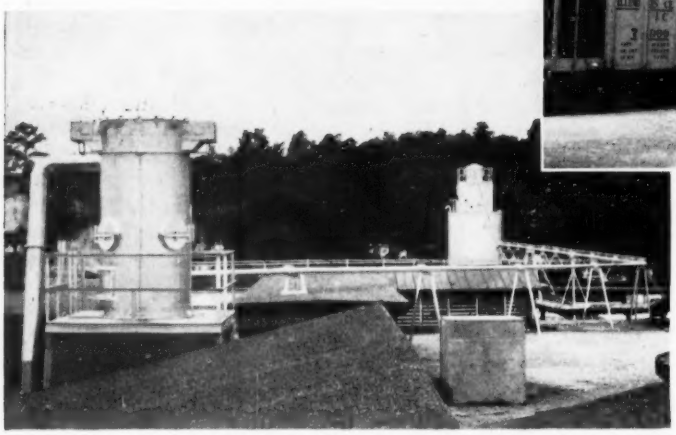
FIRST

AVONDALE MILLS

inaugurates use of air-conveying in the textile industry



Starch storage tank. Flexible metal hose connecting hopper-bottom car to permanent conveying line underground, and leading upwardly (right) to Airveyor receiver atop of tank. Conveying line (left) for delivery of material from storage to process in plant.



Airveyor unloading receiver and storage bin (right). Conveying line from storage to Airveyor filter (left) above slasher room in plant.

The AIRVEYOR® unloads and conveys starch

It is reported that Avondale Mills is the first company in the textile industry to adopt air-conveying of starch from bulk cars to storage, storage to process, in its plant at Pell City, Alabama. Avondale also uses the Airveyor for handling starch at its Alexander City plant.

Previous to the installation of the Airveyor, starch was received in bags in box cars, necessitating manual handling with its attendant high cost. *Now*, starch (grit or pellet), is unloaded in bulk from hopper-bottom cars under partial vacuum, conveyed through dust-tight pipe lines to a 160,000-lb. storage tank at rate of approximately 12 tons an hour, without dust or loss of material. The system is so arranged that starch can be conveyed direct from car to the slasher room, by-passing storage, if so desired.

Avondale not only saves by eliminating costly labor charges, but the price of starch, purchased in bulk is less than that purchased in bags.

The Airveyor is clean, safe, efficient. When you have an unloading, or in-plant conveying problem, why not take advantage of Fuller's 27 years of experience in the field of air-conveying. A study of your problem will cost you nothing . . . may well be your first step forward toward consistently profitable operation and smoother flowing production. Write us today!

Fuller

CONVEYS BY AIR

. . . NOTHING MOVES BUT THE MATERIAL

FULLER COMPANY—CATASAUQUA, PA.

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A-177

DRY MATERIAL CONVEYING SYSTEMS AND COOLERS . . . COMPRESSORS AND VACUUM PUMPS . . . FEEDERS AND ASSOCIATED EQUIPMENT

mills for carrying stacks of empty bobbins and spools to machines, for transporting full spools or bobbins to subsequent processing operations, or to storage. There are many mills where one man thus handles bobbins to the twisters and removes completed work. A system of this kind is far more efficient than lifting boards on and off hand trucks in the old manner.

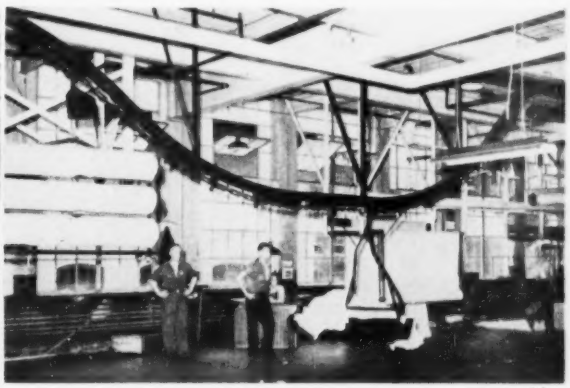
Bobbin Cleaning and Handling. In different places, a complete bobbin cleaning and handling system is employed, in which full boxes of uncleaned loom bobbins are raised by a bobbin box hoist and emptied onto a hopper at feeding level for a bobbin cleaning machine. An operator is required to run each bobbin cleaning machine. After the bobbins are cleaned, they are carried to a bobbin storage bin by means of a conveyor. The actual conveyor installation varies with requirements of different mills. The bobbin storage bin may be, and usually is, divided into sections for different lengths of bobbins. Gates are provided on a horizontal conveyor for discharging certain types or sizes of bobbins into their respective bins.

The bobbin box hoist employed provides a rapid means for getting a large amount of bobbins to the machine-feeding level, and at the same time greatly reduces manual effort of the machine operator. Such a hoist will usually increase an operator's production by anywhere from 15% to 20%, as compared to loading the machine hopper by hand. The hoisting unit may be used to serve one, two, or three bobbin cleaning machines, if desired, by providing suitable hoppers for the purpose.

The conveyor installation is such that a large number of bobbins may be stored in bins located

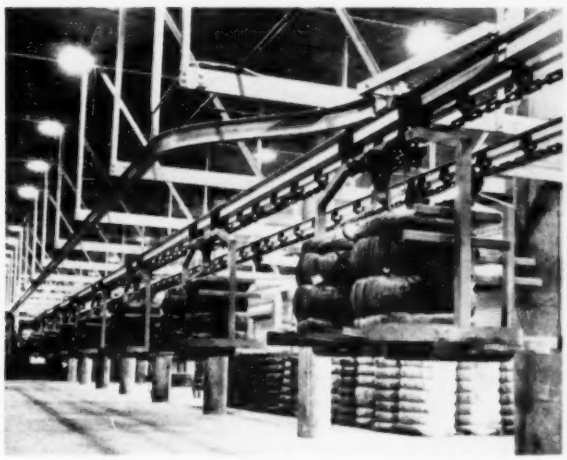
13

LIGHT-DUTY "TUG" TRACTOR hauling a train of various special types of trailers designed for operations in several departments of the mill.



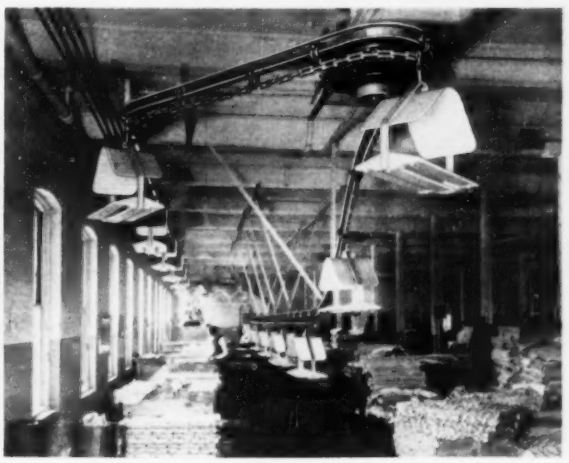
14

SPECIAL CARRIERS on overhead chain conveyor are suited for handling piles of cloth during processing at Talbot Mills, North Billerica, Mass.



15

PUSHER-BAR OVERHEAD CHAIN CONVEYOR with load suspended from free track, handling bales of wool from railroad cars and warehouse storage to warming rooms at Julius Forstmann & Company, Passaic, N. J. Heavy-duty carriers transport material to desired location as required.



16

SLAT-TYPE TRAY CARRIERS on overhead chain conveyor operating between sorting, inspection, and classification of cotton goods, servicing all departments through various floor levels. The hoods provided on the tray-type carriers are for protection of the material in transit.

"What's in a name?

That which we call a rose
By any other name would smell as sweet."
— Shakespeare

And we heartily agree. For although we have changed the name of our Sodium-Oleyl-Methyl-Tauride product, it's just as versatile as ever for processing textile fibers. ONLY THE NAME HAS BEEN CHANGED!

Selapon Gel Is Now **Sellogen Gel**

Our SELLOGEN GEL formulation is *still* the powerful detergent it always was; *still* doesn't precipitate in the presence of metal salts; *still* is unaffected by bleaching powders, peroxide, and hypochlorite; *still* is an effective wetting-out agent for natural and synthetic fibers; *still* is first rate for bleaching, finishing, and acid milling.

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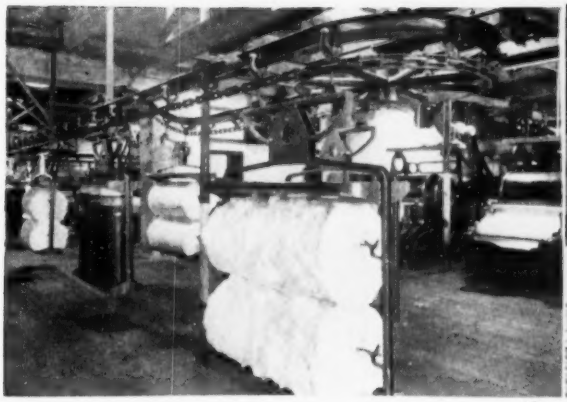
JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.



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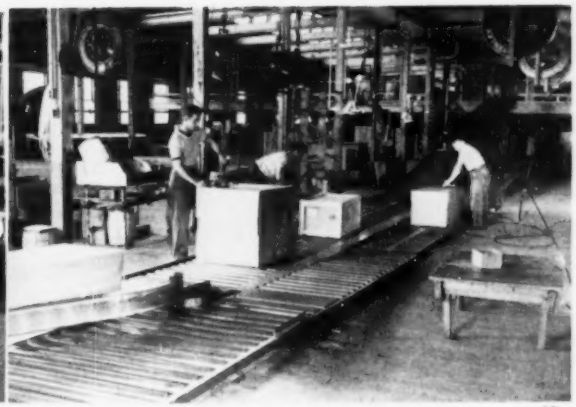
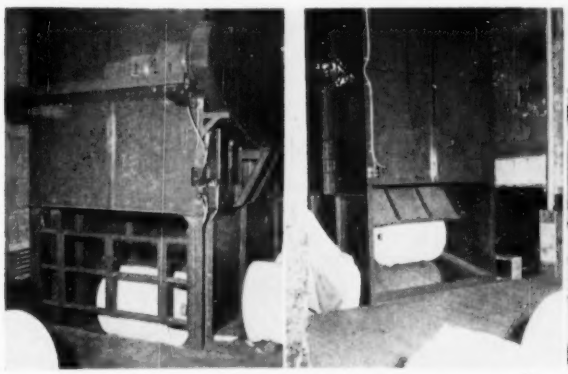
ROLLS OR CANS are handled by carriers on overhead chain conveyor at Graniteville Company, Graniteville, S. C. Complete stability of the carrier is maintained regardless of offset load conditions.



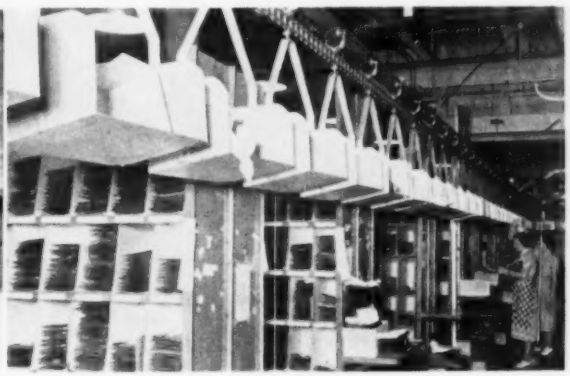
18

LIVE ROLLS AND GRAVITY-ROLL CONVEYORS deliver packaged goods for steel strapping and nailing, on the way to the shipping department at Mount Hope Finishing Co., North Dighton, Mass.



19

SPECIAL AUTOMATIC LOWERING MACHINE, employed for lowering heavy rolls of cloth from second floor to first floor. View at left shows second-floor station. View at right shows first floor station where a roll of cloth is being discharged.



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EXPEDIENT PACKAGE HANDLING is provided by overhead conveyor chain equipped with trays in the order-filling department of Real Silk Hosiery Mills, Inc., Indianapolis, Indiana. Over three million packages are handled annually on this system.

in elevated position, to save floor space. There is an additional advantage to this, in that such a system practically eliminates all bobbin handling. The bins being elevated, a bobbin truck may be run under them and loaded by gravity. The method also provides a quick and easy means for keeping different lengths or types of bobbins separated without having bulky bins along the floor for the purpose.

Special Trucks, Crates, and Boards. Pin trucks or bobbin transportation trucks may be obtained in any desired pin spacing and any number of pins. Modern trucks of this type are often provided with tubular framing. Efficient cone trucks are used for transporting yarn from the receiving room to high speed warping creels, and the trucks are ideal for storage and yarn protection when creel must be doffed before cones are empty. Modern trucks of this type are often fitted with rubber-tired casters and ball bearings.

Nylon cylinder trucks are suitable for use in conditioning boxes, in the lag room, and also for transportation. They may be made to accommodate any number of holders and to fit any size of conditioning box. They are often constructed of cadmium-plated steel or of stainless steel. Crates for handling yarn or tubes in horizontal position to prevent sloughing of yarn, shell boards for headless packages, self-stacking cone boards, and highly efficient quill boards are all readily available and much used.

Pin boards, whether designed for handling bobbins, cones, tubes, or other units, should be so designed that they may be readily handled and stacked, and the boards should be of uniform size. Preferably, they should be as large as may be conveniently handled by operators, but no larger. It is good practice to gauge the size of board by the exertion required in

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lifting and placing the top pin board in a stack. Stacks may be arranged on pallets, or on half-live skids or trucks, to provide a convenient arrangement in a given mill. Stacks of material on pallets may be readily picked up and transported by fork-type trucks, provided the truck is handled by an efficient operator who will use care not to bump or spill the load.

Methods of Yarn Handling. Yarn may be handled by various methods. Spooling, warping, slashing, and weaving processes have all been served in various ways. In some mills, belt conveyors may be employed to advantage. In others, a tramrail may be fitted with suitable carriers, or it may be found advisable to use some type of light bridge-crane system. Trackless trailer trains, hauled by tractor, have been successfully used for handling bobbins, coils, and various other items inter-mill. The tractor used is generally small, yet adequately powerful for the purpose. Usually it is designed to allow the operator to ride.

Whether yarn on quills, bobbins, or cones should be handled in boxes, pin trucks, box trucks, or on conveyors, is often best decided by considering the specific mill layout and relation of the handling equipment to the machines and general production scheme. Between floors, yarn may be handled in boxes or cases, often by gravity conveyor downward, or by pusher-bar conveyor where it is necessary to elevate the yarn to an upper floor. Trucks may be designed for convenient and efficient distribution of yarn, simply by giving their design a reasonable amount of thought. Modern installations for handling package yarn through the process of dyeing often make use of suitable tramrails and light bridge-cranes, together with a proper type of hoist, much the same as in dyeing raw stock.

Beam handling has been simplified in many instances by using fork trucks, or other power trucks particularly designed or adapted for the purpose. Special beam racks are often used for beam storage. Such racks may be either stationary or movable.

In some instances, racks holding two beams are arranged so they may be readily picked up and transported by a power-type fork truck. In other installations, beam-storage racks of two-deck type are arranged to accommodate a large number of beams. In some instances, beams are handled with a truck equipped with an ordinary fork, but pads are slipped over the fork tines when beams are being handled, so there will be no damage to material.

Overhead Beam Handling. It is admittedly true that beams are handled successfully and safely on overhead systems. In some instances, the installation used for handling beams with overhead equipment is quite simple. In others, bridge-cranes are involved.

It is true that specially-constructed dollies are still found in many weaving mills for handling warp beams; however, overhead systems are convenient and expedient for handling heavy units.

Using overhead equipment developed for the purpose, one operator can remove a beam from the machine, transport it and put it in the rack. Usually, the same overhead system can be arranged to service the slasher. Overhead beam-handling equipment is now specified for twister rooms in practically every recently-built mill employing beam twisters. Beams are, however, sometimes transported on trackless trailer trains. Where this is done, specially-designed beam trailers are used. Many other materials and items are commonly transported in the same train.

Special battery filler trucks are often credited with saving labor, time, and yarn, not to mention lowering weave-room costs and improving efficiency. Some of these trucks are particularly designed for use in narrow aisles, are readily operated by women, and greatly reduce fatigue.

Aspects of Cloth Handling. Modern methods of cloth handling cannot be ignored with impunity by any progressive mill. Overhead chain conveyor installations are used to advantage in different cloth-handling operations. The tractor-operated trackless train is also used for cloth transportation, this being one of the many functions of such trains around the mill. Special cloth-roll handling equipment has been designed and installed in mills where it is necessary or desirable to lower rolls of cloth to the first floor. These devices deliver heavy rolls of cloth to the first floor much faster and with less manpower than they can be moved by truck to a platform elevator and then followed through with the roll on trucks to the first floor.

Obviously, where packaged cloth or other packaged textiles are involved, live-roll conveyors, gravity-roll conveyors, belt conveyors, or other types may be employed for moving the packages to be steel strapped, nailed, shipped, or stored. In some instances, conveyors of one kind or another play an especially important and interesting part with reference to sales and shipment. One interesting installation of this type is use of an overhead chain conveyor with special carriers employed in filling hosiery orders.

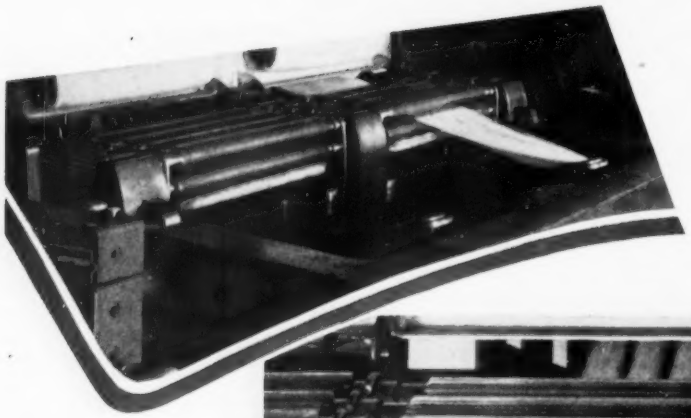
Lower costs, safety, and efficiency are regarded as basic factors involved in considering installation of new materials handling equipment in the mill. The quality of the product may also be affected, especially where too much handling or too rough handling may damage yarn or fabric. It is always worthwhile, before making any extensive investment in new materials handling equipment, to make a good production layout of the proposed equipment in connection with a layout of the mill involved. Doing this will often allow one to foresee hidden factors which may otherwise be overlooked.

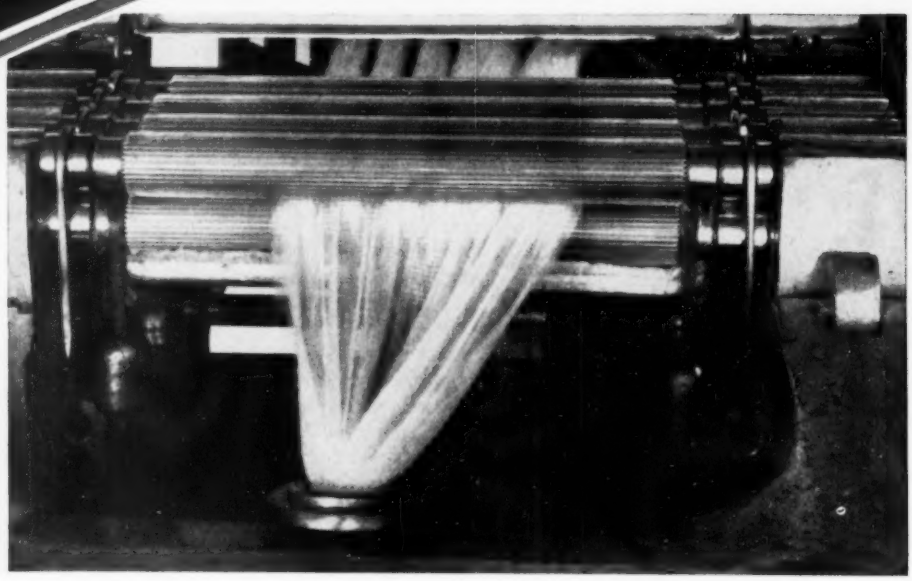
Source of Illustrations

Photos used to illustrate this article were furnished by the following manufacturers of materials handling equipment (numerals after firm name designate photos provided by that particular firm; photos are numbered serially from 1 through 20, directly below at the right):

Barrett-Cravens Co.—1; Yale & Towne Mfg. Co.—2, 5; Link-Belt Co.—3, 7, 9, 18, 20; The Elwell-Parker Electric Co.—4; Cleveland Tramrail Div. of The Cleveland Crane & Eng. Co.—6, 10, 11, 12; Lamson Corp.—14; Mechanical Handling Systems, Inc.—15, 16, 17.

We Can Prove Our Claims Before You Buy





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We can prove to you that Ideal's High Speed Drafting System produces better quality roving—before you buy a single roll.

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Those mills which have followed their processed fibre through to the finished goods report better running work, fewer ends down, and fewer seconds in finished goods.

These advantages alone make Ideal Drawing Rolls your logical buy. In addition, mills using them report about 40% greater production per frame and well over 50% reduction in maintenance costs—against the very best performance of conventional type drawing. Let us process samples of your sliver now. Then, when you are ready to consider replacement of old rolls, we will equip one of your frames with Ideal Ball Bearing Drawing Rolls and let you judge their performance for yourself.

Let us demonstrate the advantages of Ideal Drawing Rolls. No obligation.

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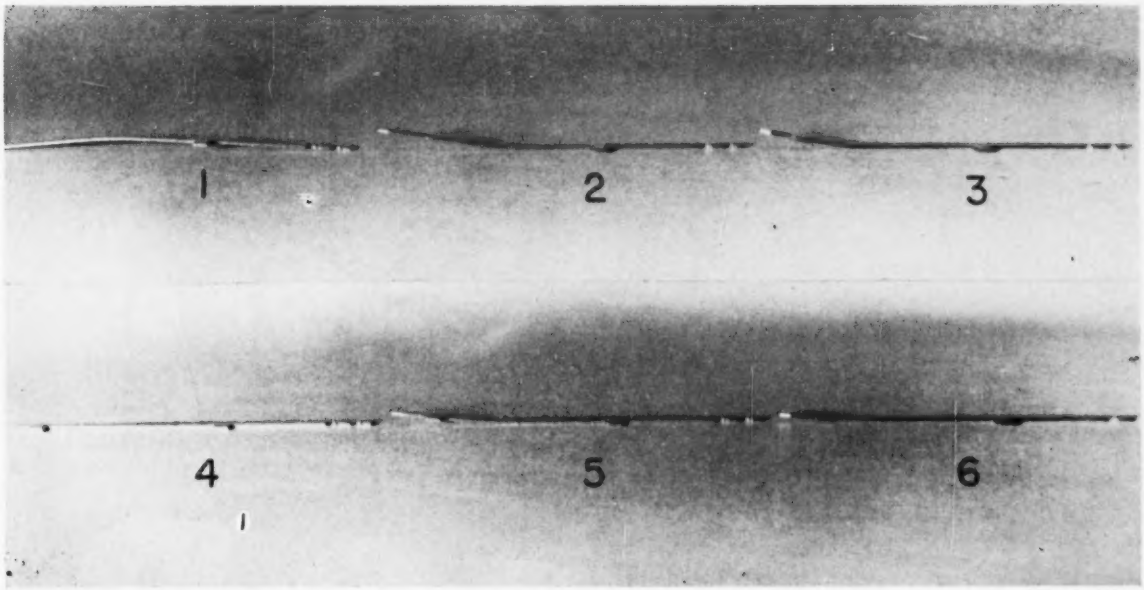

KOMET SLIDERS — all 48 gauge: (1) has reverse crimp — this is done occasionally but is incorrect. (2) Crimp is too long and extends too far up the slider. (3) Excessive crimp. This slider will exert too much tension. (4) No crimp — slider is perfectly straight and will have no tension. (5) Crimp in proper place but arc is too great — too much friction area against cylinder wall. (6) Slider as it comes from the factory — very little if any additional crimp is required.

Be sure that tension is correct when

Installing Komet Sliders

By K. O. METZ

EXCLUSIVE

FOR MANY years I have had an opportunity to see at first hand what happens to sliders on a large number of Komet and Links and Links machines. Sliders are frequently abused. There are many reasons why sliders must be replaced; many reasons why they are broken or damaged. In this article we are primarily interested in *how* they are replaced, not why.

Correct Tension. Sliders as they come from the factory are crimped near the lower end to provide enough tension or friction so their movement will be controlled during all knitting and transferring operations. Excessive tension is just as bad or worse than insufficient tension. A large number of sliders can be used just as they come from the makers. On some sliders the tension will have to be increased or decreased slightly according to individual need, but each slider must have correct tension for the slot into which it is placed.

To do a good job, the fixer should check or test every slider he puts into a machine to make sure the tension is correct. I have been asked why some sliders fit loosely in the cylinder slots; some tight; a few, much too tight. There are four primary reasons: (1) a slight variation in thickness of sliders; (2) variation in crimp; (3) variation in space between cylinder walls; (4) bent or damaged cylinder walls.

The crimp in the slider serves a dual purpose: to help keep the sliders under control, and to offset or overcome the variation in space between cylinder walls.

Insufficient Tension. The importance of proper tension on sliders should be emphasized. What happens when there is insufficient tension on some sliders? Let us assume that we have a few loose sliders scattered among short and medium butts which are used for up and down picking while making heels and toes. Loose sliders will not be picked up by the lifters, especially if and when the lifter springs are tight. The slider

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3-3

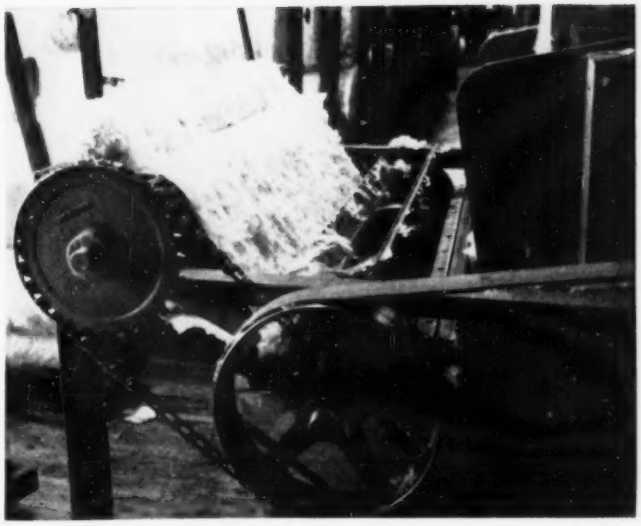
knitting butt simply strikes the lifter and rides up and over it, resulting in uneven gores and button holes. The fixer usually checks for improper lifter setting, but if he finds the lifter setting correct, he has slider trouble.

If a machine makes dropped stitches on a given needle on plain fabric in the leg or foot, the first thing the fixer checks for is a loose slider. The fixer is right eight times out of ten. Loose sliders are not a serious problem, yet they continue to cause more or less trouble until they are given the correct amount of tension; in fact, sliders with insufficient tension force the fixer to take some action.

Excessive Tension. Here is where the slider situation really gets serious. Why? Because excessive tension takes its toll on every revolution of the cylinder day after day, week after week. Right here let me say that the average Komet fixer does not put excessive tension on sliders because he actually wants to invite trouble; perhaps he has had some past experience with loose sliders which he wants to avoid. He begins to think in terms of tighter sliders to *prevent* trouble, and before he realizes it he is using more tension than is actually needed to control slider movement properly. When that happens, firm foundation is laid for unnecessary wear on every cam or part which raises or lowers sliders during all knitting and transferring operations, plus excessive wear on the slider butts also.

This alone covers a lot of territory; now add to it excessive friction on cylinder walls, unnecessary wear on back pickers and lifters, a heavy load on machine belts, drives, and motors, and one can readily see how important and far reaching that small crimp on a slider really is. Now let's dig a little deeper—let's assume we have 50 machines or more on one line shaft; we have from 15 to 20,000 sliders constantly in motion. If we keep this picture in mind, slider tension becomes more important.

If you want to add fat to the fire, check your Links and Links machines and see if excessive slider tension will affect this attachment adversely. Bear in mind that excessive wear goes on until the cause is removed. In the meantime, it is necessary to buy more sliders and more machine parts. Production cost goes up and pro-



Feeder for Bad Picker Laps

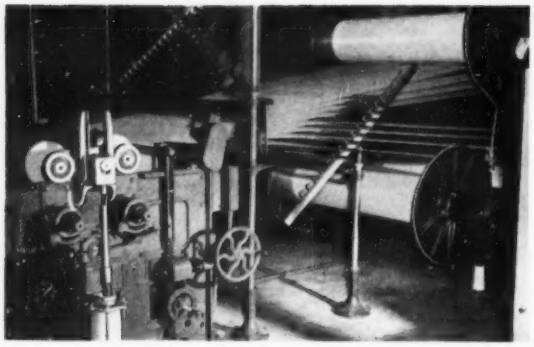
An improvised lap feeder operates automatically and serves to regulate the amount of bad picker lap fed to opener hoppers. This arrangement (see accompanying illustration) is instrumental in preventing the addition of too much of the lap waste to the hopper at one time. The improvised apparatus also obviates the necessity of unrolling the lap by hand and feeding it to the hopper manually. The device was made in the mill shop at a large southern mill and has served its purpose well.

The lap feeder beater is geared to revolve faster than the feed roll in order to tear up the lap as it is fed to the hopper. There has been no maintenance to date on this device which has been in satisfactory operation for more than three years.

Department of Commerce Publications of Textile Interest

The following publications of interest to the textile industry are obtainable at U. S. Department of Commerce regional offices located in Atlanta, Boston, Chicago, Cleveland, Dallas, Denver, Kansas City, Minneapolis, New York, Philadelphia, Richmond, San Francisco, and Seattle:

	Price
Circular 455—Flameproofing of Textiles	0.10
Release—Review of Current Trends prepared by Textile and Leather Division OKC 335	Free
Business Information Service	
Burlap Background and Developments	Free
Miscellaneous Vegetable Fibers, March 1950	Free
Cotton and Cotton Manufactures	Free
Facts For Industry	
Tufted Textile Products and Woven and Knitted Cotton Rugs	0.10
Knit Cloth for Sale, 1951	0.05
Wool Manufactures	0.10; $1.00 a year
Cotton and Synthetic Woven Goods Finished 1950	Free
Burlap Stocks, Dec. 1950 and 1951	0.05
Carded Cotton Sales Yarn	0.05; 0.25 a year
Synthetic Broad Woven Goods	0.10; 0.50 a year
Cotton Broad Woven Goods	0.10; 0.50 a year
Cotton and Linters	0.10; 1.00 a year

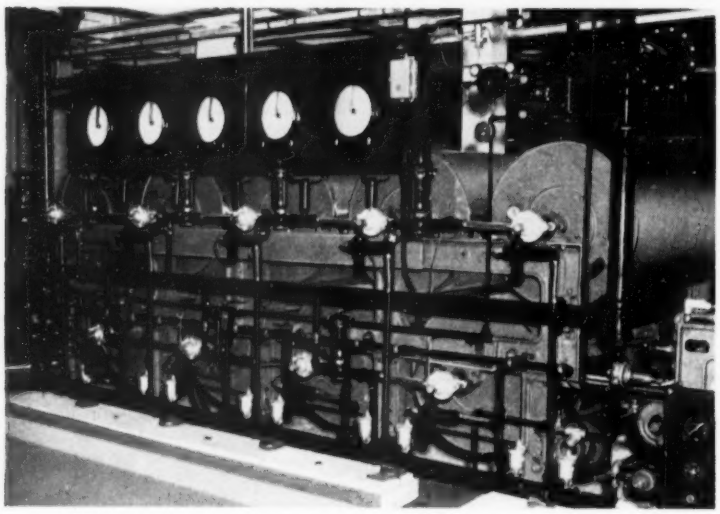


PNEUMATIC LOADING on squeeze rolls. At right is shown DOUBLE-DECK CREEL for synthetic filament warps.

PROVED

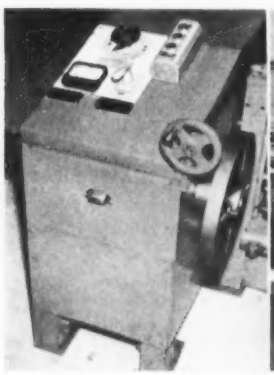
IN ACTUAL MILL OPERATIONS

. . . a faster, more versatile quality producer

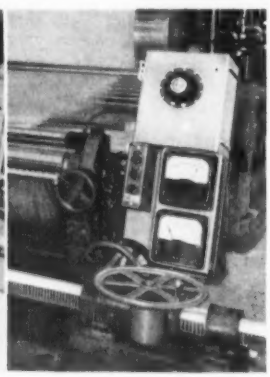


INDIVIDUAL TEMPERATURE CONTROL on each cylinder insures high quality. The polished stainless steel cylinders with welded-in steel heads may be operated at pressures up to 35 p.s.i.g.

THE WPF&M MULTI-CYLINDER SLASHER



PUSH BUTTON CONTROL of multi-motor drive provides smooth and fast response to necessary speed changes. *No mechanical friction clutch.*



TENSION CONTROL PANEL conveniently located. TRAVERSING TAILSTOCK with handwheel to move arbor in and out.

In actual mill operations, the versatile WPF&M Multi-Cylinder Slasher has proved it can produce a consistent, high-quality warp on a wide range of natural, synthetic or blend fibers at high speeds and low operating costs.

The Multi-Cylinder Slasher is designed for and furnished with a superior slasher drive . . . the mill-proved multi-motor drive which completely eliminates the friction clutch and friction compensating devices along with friction maintenance. This all-electric drive provides a smooth constant tension wind-up of the loom beam and packs more yards on the loom beam.

This WPF&M Multi-Cylinder Slasher is one of the complete line of modern Slashers manufactured by the West Point Foundry & Machine Co.—specialists in Slasher Room machinery and equipment.

We will be glad to furnish you with complete details on the Multi-Cylinder Slasher without obligation, of course.

WPF&M WARP PREPARATION MACHINERY
Standard 2 and 3 Cylinder Slashers
Cyl-Air Slashers · Air-Dri Slashers · Multi-Can Slashers · Callaway Sample Slasher
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SLASHER MODERNIZATION EQUIPMENT
Hi-Speed Head Ends with Stretch Control
Standard WPF&M Head Ends · Multi-Motor Drives and Controls
Temperature, Speed and Tension Control Devices
Hi-Speed Size Boxes—Model 50 Size Boxes
Standard Size Boxes—Size Kettles and Equipment

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA

duction goes down—the mill loses two ways.

Slider Troubles. Knitting butts on all sliders are subject to wear on both the upper and lower portion of the butts. Due to the amount of work they do, knitting butts will show more wear than transfer butts. Excessive tension, therefore, will affect knitting butts to a much greater extent than transfer butts. Knitting butts on the sliders control the movement of knitting needles, consequently worn slider knitting butts can cause streaks and lines in the knitted fabric. Worn knitting butts can also cause transfer trouble, up and down picking difficulties, and numerous other knitting troubles.

The needle controlled by a badly worn knitting butt will not be in the same relative position as needles with full width slider butts. The same reasoning applies to the positions of full or worn knitting butts in relation to up and down picking operations and many other functions performed by knitting butts.

I have heard several discussions among Komet fixers as to whether or not knitting butts have anything to do with transferring operations. The answer to this question is simple. If there is any doubt in the fixer's mind, he should check a machine while a transfer is being made and see which cams the knitting butts are resting on.

While a down transfer is being made, the knitting butts in the lower cylinder rest on the upper surface of a guard cam on the lower cam section. For up transfers the knitting butts in the upper cylinder rest against the lower surface of the dwell cam on the upper cam section. In both instances the knitting butts hold the slider in proper position to receive needles being transferred up or down. Fortunately, sufficient tolerance has been allowed to cover normal wear on knitting butts. If this were not so, transfer trouble would be magnified.

Upon considering the amount of wear Komet sliders must endure, it is amazing how they stand up so well so long. Careful checking for badly worn butts when sliders are being removed or replaced for tips after they are put in. There any reason will pay big dividends. should be barely enough tension The important factors to remember to permit them to move freely are too much tension or too little. without binding. As a rule, finer

Now someone may ask: What is gauges require less tension than the correct amount of tension for coarse gauges. Avoid excessive sliders, and how can we determine tension on any gauge. Keep in when it is just right? mind also when increasing or de-

In this instance practice makes creasing tension that the makers perfect, and experience is essential. had very definite reasons for Fixers must develop a sense of placing the crimp in sliders exactly touch or feel by raising and lower- where they did; avoid bending ing sliders with pliers or finger sliders above this point.

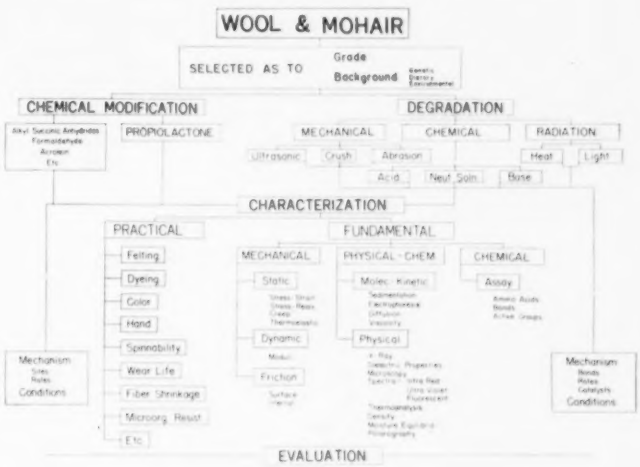
Progress in Wool Research Through Integration

The accompanying chart outlines the wool fibers study organization of the United States Department of Agriculture's Western Regional Research Laboratory.

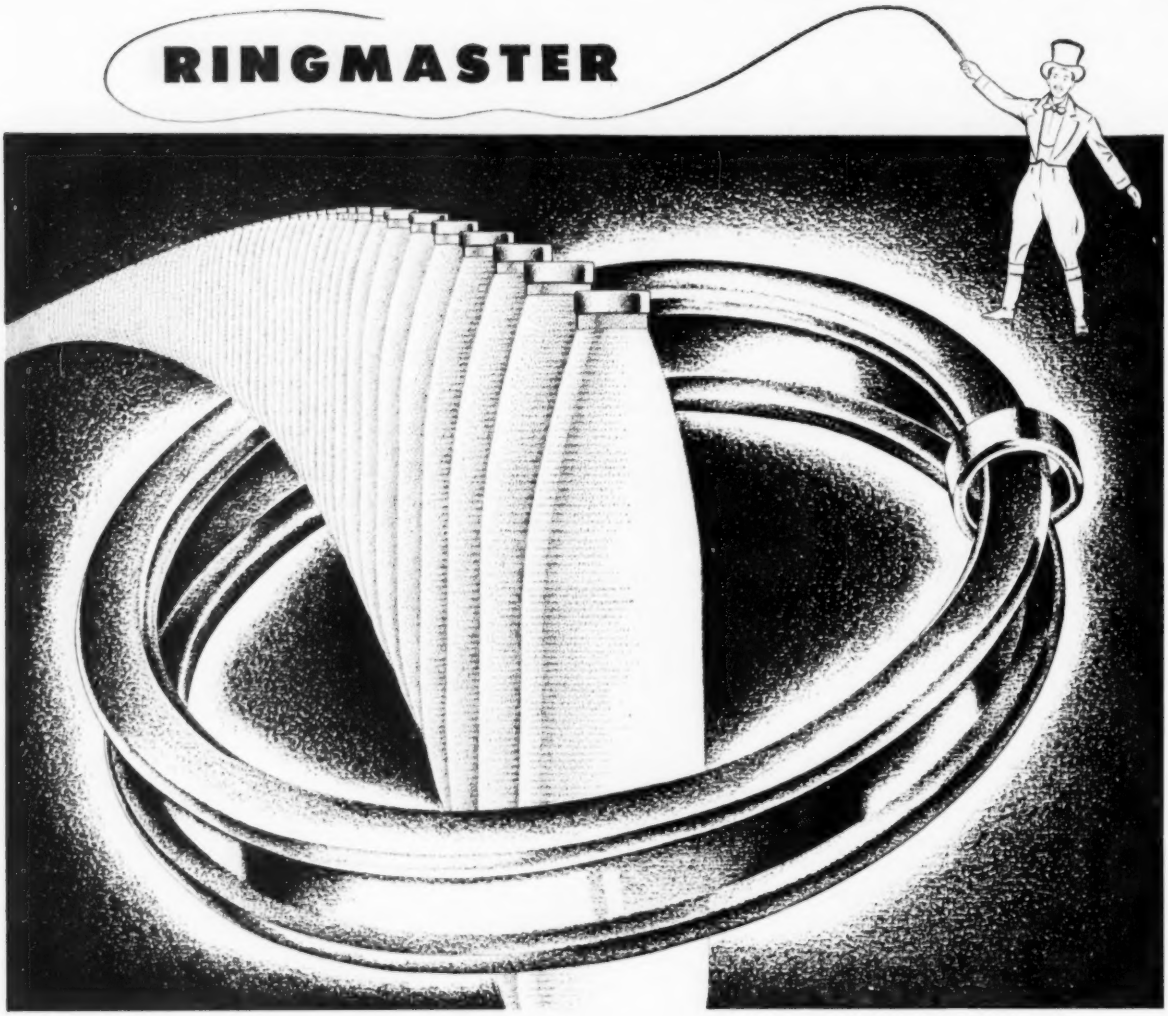
Approximately 270 people are at work in this one laboratory, being engaged in such activities as vegetable processing, fruit processing, bio-chemistry, physical and analytical studies, engineering and development, mechanical devices, proteins, pharmacology, poultry products, and administration. The diverse pursuits of these technologists have enabled a pooling of equipment and talent for the study of wool, which would otherwise be economically prohibitive.

Under the supervision of the Bureau of Agriculture and Industrial Chemistry, this laboratory is located in Albany, California. It works closely with other regional laboratories, particularly Eastern where a wool grease investigation is in progress. It also coordinates with the Production and Marketing Administration's Denver, Colorado, laboratory (classification tests for grading and scourable branding fluids) and the Bureau of Animal Industry's Beltsville, Maryland, breeding experiment station (carding, combing, and small scale solvent scouring system) and DuBois, Idaho, breeding station (sheep raising, agronomy, sheep management).

One of the most important functions of the Albany laboratory is the complete investigation of the chemical structure of wool and the effect of newly available chemicals on wool. The objective is to increase the usefulness of wool. A typical study now underway is the effect of propiolactone on wool for improving its felting characteristic.



RINGMASTER



. . . of more than 12,000,000 smooth-running spindles!

TODAY, Victor Travelers ride the rings on more than 12,000,000 spindles, after 50 years of steadily increasing preference among the nation's ablest millmen. The reasons are clear.

First, consider cost. Since the true measure of a traveler's worth is in the number of pounds of yarn it spins or twists in its lifetime, millmen prefer those that *cost the least per traveler-pound.*

Victor Travelers consistently deliver more pounds of top-quality yarn — under the toughest conditions — at the lowest possible cost per traveler-pound.

Second, consider design. Whether a mill runs conventional fibers, synthetics, or blends, there is always one traveler that is *right* for the work being processed. Victor service saves you valuable time in selecting that *right* traveler — in setting up the smooth-running spinning or twisting desired.

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The recent truce in Korea still leaves us in

A Wartime Economy

By RINGGOLD ARDEN

EXCLUSIVE

FOR ABOUT 13 years the people of the United States have lived through the unreality of a wartime economy—an economy in which loss is made to appear as profit, and exhaustion is labeled as gain. The recent truce in Korea still leaves us in a wartime economy, and this will probably be with us for many years to come.

The Korean truce appears to have settled nothing, and demonstrated very little, except that both sides seemed to feel that military victory was too expensive.

The Communists will now very likely go ahead with their more favored weapons of intrigue, sabotage, propaganda, and labor disturbances, to gain what could not be obtained by military action; and of course other military actions may be stirred up, and some of those already going on can be intensified. We are still at war with Communism, and are going to be at war with it for years, or possibly generations to come.

We have as yet made practically no attempt to adjust our national economy to these facts of war, but have blithely proceeded on the assumption that plenty of nice fat war orders would create widespread employment and bring happiness and prosperity to millions of people. The harsh fact that destroying your substance does not create prosperity has been ignored by the American people and those who govern them.

For almost exactly 20 years, the Government of the United States has been in the hands of people who seemed to be firmly committed to the thesis that inflation is a sovereign remedy for every economic ill. As economic emergencies arose, a benevolent government was always on hand to bail out the distressed groups and charge the expense of this largess up to the National Debt. The alarms and exigencies of war during the past 13 years made this policy rather simple of execution.

Now that millions of people are wondering what effect the Korean truce will have on our wartime economy, it is well for those who pay the taxes and also suffer from the inflation which takes the place of taxes, to be thinking of some of the things that have happened and some of those which may happen.

The cessation of actual hostilities in Korea will reduce the immediate outlay for all sorts of expendable items, and will probably cut back Government purchases of textiles along with thousands of other things. However, instead of spending money and energy producing munitions and supplies for immediate expenditure, we have got to face terrific costs for continuing military preparedness, and we have got to decide whether to calculate these costs on a realistic basis of getting what we need at the lowest possible price, or to continue the wasteful inflationary policies which have governed our military procurement for so many years.

During the Second World War, it would seem to any observer who chose to investigate what was going on, that the ruling policy in military procurement was dictated by the inflationary political doctrine which declared that the more you spent, the more prosperity you could have, and the object seemed to be to get the greatest number of people together in every war enterprise, and pay them the highest possible wages without the slightest regard for what this might do to the national economy in the postwar years.

The typical shipyard or munitions plant or aircraft plant or any other war agency was cluttered with swarms of drones who did nothing but draw fancy wages as the reward for their idleness, and then pour these wages into the channels of trade to create the fiction of prosperity. You are never prosperous when you are destroying your substance. Prosperity is based on *creation*, and not destruction.

For many years we have measured our prosperity by the extent of our losses, rather than by a consideration of our gains. During the past fiscal year the federal government spent nearly 80 billion dollars, and nearly all of this represented a dead loss to the national economy in terms of actual substance, but a thrilling gain in our so-called prosperity, if judged by paper money turnover during the year.

After the First World War, we disbanded our military forces and settled down to the enjoyment of the "prosperity" created by the dissipation of the money used for getting the things which were destroyed during that war. At the same time we resolutely refused to have anything to do with securing to ourselves the things for which we entered that war.

Following the Second World War, we tried our best to do exactly as we had done after the first one, and with all expedition we packed up and left the fruits of victory on the battlefields behind us, and invited our worst enemies, the Communists, to come in and enjoy these fruits. In order to win this Second World War, we had spent several hundred billion dollars, and everybody was glad that with the war over we could enjoy the "prosperity" created by all of this wonderful expenditure of cash.

Our method of financing the Second World War was probably

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the noblest experiment in inflation in the history of this world, and just as the blush was beginning to rub off of the postwar boom, the Korean affair came along to keep our "prosperity" in high gear.

Another episode in the history of keeping prosperity by giving away your substance was the European Recovery Program. By 1948, the postwar boom was sagging a little in spots. The textile industry was in a definite depression, and farmers and cattle raisers were beginning to produce surpluses which would either beat down prices to start another big depression, or force the Government to buy billions of dollars' worth of stuff that it didn't need, and for which it had no good way of disposing. The European Recovery Program was a timely and happy solution of this vexatious problem.

We do not offer any opinion as to the desirability of this European Recovery Program, but are merely commenting on the economic effects of the way it was handled, so that it became a happy dumping ground where an embarrassed National Administration could get rid of billions of dollars' worth of worrisome farm surpluses without having to face the distressing circumstance of accepting foreign goods in payment for exports of farm products.

By letting the foreigners pay for what they got, we would create distressed industrial areas on account of imports of foreign goods, but by simply giving the stuff away and charging the loss to the National Debt, everybody was happy and "prosperity" reigned supreme.

In one year, we got rid of an embarrassing cotton surplus of about two million bales and the next year we gave away about four million bales. Getting rid of this surplus permitted the farmers to raise more cotton at a profit, and kept the price of cotton at a comfortably high level which could be maintained by the purchasers of textile fabrics paying more for these than they would otherwise have done.

Unfortunately, a poor cotton year intervened, and our Federal

Single Scale Measures Both Cotton Fiber Fineness and Maturity

A single Causticaire scale for use in measuring both fiber fineness and maturity of all botanical types of cotton having a weight per inch of fiber of less than 8.0 micrograms has now been perfected by technicians of the Cotton Branch, Production and Marketing Administration, United States Department of Agriculture. In a preliminary report describing the Causticaire method for determining cotton fiber maturity and fineness (abstract appeared on page 197, TI for November, 1952) it was stated that development of such a scale was contemplated.

The revised Causticaire scale, a reduced reproduction of which is shown here, is graduated in index points from 10 to 110. Airflow in cubic feet per minute can be approximated for index readings of 30 to 100 by use of the following formula:

$$CFM = (0.0236 \text{ Index}) - 0.20$$

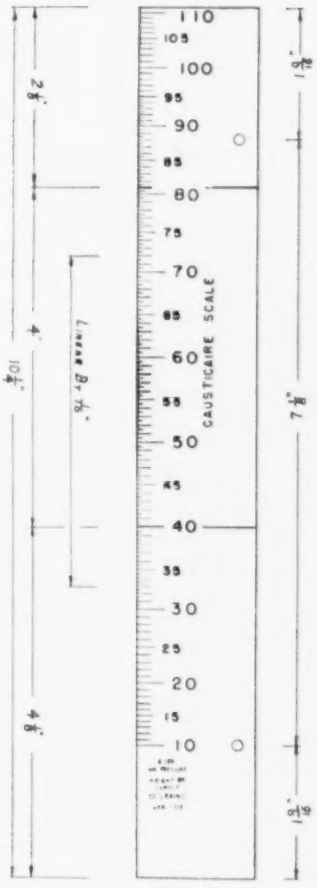
The portions of the scale below 30 and above 100 are not closely related to airflow.

The calibration points on the Causticaire scale are at the same positions in the tube as those of the current standard calibration of the Micronaire. When calibrating the instrument with the two standard orifices, the revised Causticaire scale shows readings of 40 and 81 for the lower and upper calibration points, respectively.

The Causticaire procedure for testing samples of cotton for fineness and maturity is as follows:

(1) Condition and blend a 7- to 10-gram laboratory sample on a mechanical cotton fiber blender (description of a blender was published in TI for March, 1952, page 123).

(2) After calibrating the Micronaire, weigh two 50-grain specimens and make standard Micronaire tests using Causticaire scale (one reading on each specimen).



(3) Treat the two specimens plus residue from blended sample in a solution of sodium hydroxide (40 TW) with a 1½% wetting agent added. Be sure sample is completely saturated.

(4) Wash thoroughly in warm water; then dry sample.

(5) Condition and blend treated sample on mechanical fiber blender to fluff cotton.

(6) Weigh two 50-grain specimens and make standard Micronaire tests on treated sample using Causticaire scale.

(7) Calculate maturity index and weight per inch as follows:

$$\text{Maturity Index} = \frac{\text{Average Causticaire reading (untreated)} \times 100}{\text{Average Causticaire reading (treated)}}$$

$$\text{Weight per inch} = +1.185 + 0.00075(T^2) - 0.020(MI)$$

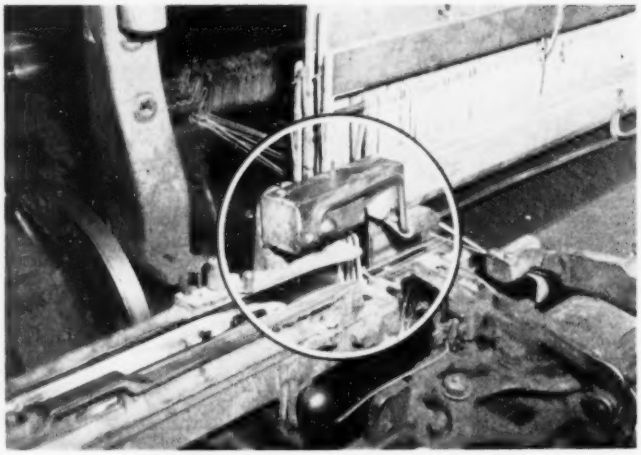
where,

T = average of readings on treated specimen
MI = maturity index

Having Trouble with Split Reed Caps?

Split reed caps have been reduced in the weave room at the White Oak Plant of Cone Mills Corporation, Greensboro, N. C., as a result of a simple but effective suggestion by Lee Sizemore.

Formerly, reed caps were sometimes split or burst by the shuttle guard smashing into them when the fixer hammered the end of the reed cap during the mounting of a new warp. Mr. Sizemore suggested that a piece of 2-inch angle iron, 6½ inches long, be bolted to each end of the reed cap, replacing the usual leather strip. The adoption of the suggestion has solved the problem of split reed caps.



A cash award under the Cone Mills Suggestion System was presented to Mr. Sizemore for his idea.

To Differentiate Between Type 41 and Type 42 Orlon

Recent experiments have resulted in two simple tests — a chemical test and a color test — for differentiating between Type 41 and Type 42 "Orlon" acrylic fiber, according to Du Pont Preliminary Bulletin CSB-OR-13.

The procedures are as follows:

Chemical Test. Immerse sample in a 5% solution of caustic soda for 5 min. at 180 F. Type 41 turns a deep reddish orange. Type 42 is tinted to an ecru tone. After rinsing and neutralizing, Type 41 is yellow and Type 42 natural.

Color Test. Prepare a color mix consisting of 60 parts Du Pont Basic Yellow OL, 34 parts Du Pont Basic Red 4G, and 6 parts Du Pont Brilliant Green Crystals. Use this color mix at 4% on the weight of the sample or 1 gram/liter of solution. The dye solution is prepared at a 50/1 liquor to sample ratio and contains 1% glacial acetic acid and 0.3% sodium acetate based on the sample weight. Sample is immersed in the boiling solution and dyed for 5 min. Type 41 Orlon will be green; Type 42 will be a dull tan shade.

Government, after trying frantically for two or three years to get the farmers to cut the cotton acreage, had to turn in and violently beat the drums to whoop up the farmers to raise more cotton to make up the deficit occasioned by giving away about six million bales in the previous two years.

We use cotton merely as a symbol. Other agricultural products which had to be bolstered by Federal aid were likewise dumped in Europe, whether they were needed or not. The total value of farm products in the United States in 1948 when ERP was initiated was somewhat over 30 billions of dollars, and Congress appropriated six billions for ERP. This pretty well took care of the farm surplus problem for the time being.

We therefore find ourselves continuing to flourish, if you can call it flourishing, on expenditures for war—past, present, and future. Just now, the various branches of our military service are clamoring for bigger and bigger appropriations, and will continue to clamor. It is going to be necessary to make big appropriations but it is not going to be necessary to waste as much as has been wasted out of every military appropriation for the last 13 years. However, our inflationary economy has been kept going under a full head of steam by this practice of squandering money unnecessarily to provide jobs to produce what we fondly term "full employment."

We are certainly faced with the problem of big military expenditures for a long time to come, and we are also faced with a vital decision on the question of whether we are going to continue to regard military needs as an excuse for squandering money for the pursuit of an imaginary and fictitious "prosperity," or whether we are going to regard these military expenditures as being exactly what they are—a constant drain on the American economy and a dead loss to all concerned.

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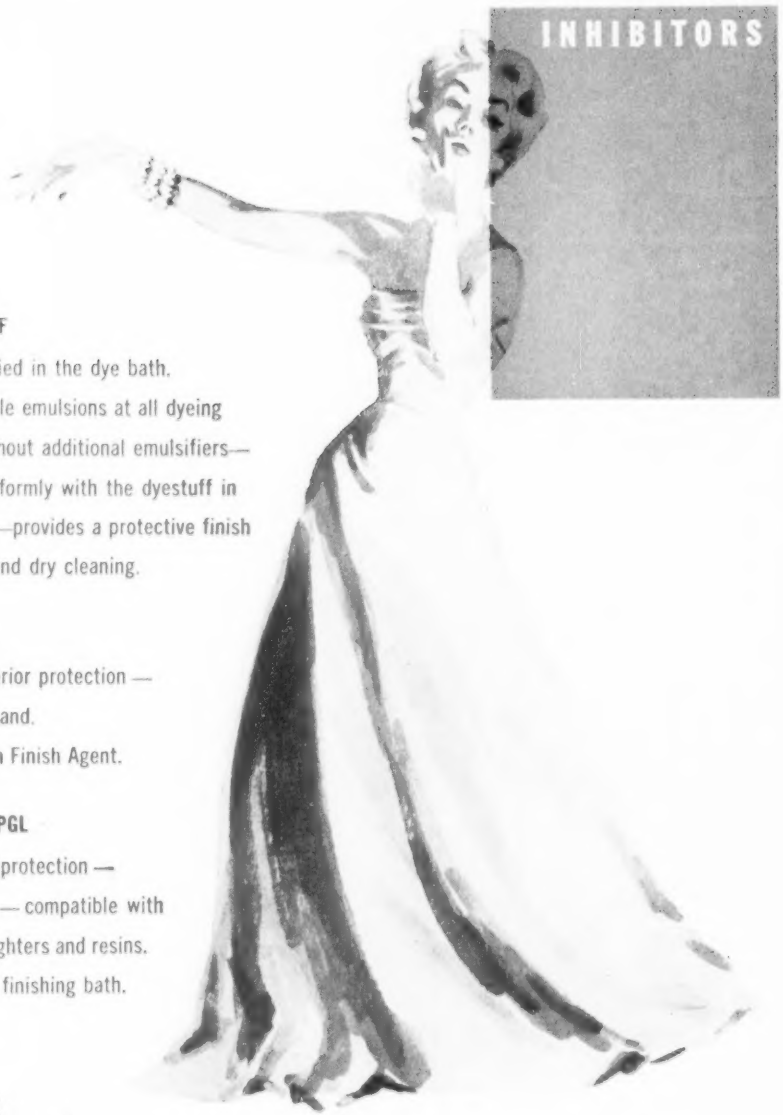

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• Manufacturing Briefs • Kinks & Shorts Cuts • Comments from Readers •

The Winnahs!!

Winners of recent TI Kink Contests were **M. Whitcher** of Canada and **Virgil Coldren** of Pennsylvania.

Mr. Whitcher's winning entry was a vacuum cleaner for looms; Mr. Coldren's, a tension device for tricot.

Says All Weight per Unit Length Yarn Variation Is Reduced by Doubling

EDITOR TEXTILE INDUSTRIES:

In the April issue of T. I., CONTRIBUTOR No. 8519 asked for a few tips on the subject of yarn variation. The discussion refers to Earl Heard's paper "Research and Quality Control Pay Off," (T. I. March, 1953), as grounds for the statement that short-term variation is not reduced by doublings and that long-term variation is reduced by doubling and drafting.

I would like to point out that all weight per unit length variations whether long or short-termed are reduced by doublings. This reduction follows the law of random selection or, as we say in textile terms, the law of doublings. This law states that the resultant variation caused by doubling N number of similar strands will be equal to the variation in one strand divided by the square root of N or $V_r = \frac{V_o}{\sqrt{N}}$, where V_o is the variation in one strand.

The increase in short-term variation mentioned by CONTRIBUTOR No. 8519 is caused by the drafting. The more ends of a given weight that are doubled, the greater will be the draft necessary to produce a given sliver weight. The optimum condition is a state in which the uniformity due to doubling and the irregularity caused by drafting are such as to produce the most uniform sliver possible with the given equipment.

Long-term variation is not reduced by drafting. The wave lengths of the long-term waves are increased and the amplitudes decreased, but the weight per yard of the sliver has also decreased, thus the long-term variation remains unchanged. This has been confirmed by laboratory tests. Doubling reduces this long-term variation very effectively.

Laboratory tests have also shown, contrary to popular belief, that the short-term variations in the undrafted stock do not become the long-term variations in the drafted stock.

No. 8519 asks what can be done about stock irregularity. I would like to mention a few points that may be of interest to him:

Tests have proved that short-term variation in picker laps has little or no effect on the short-term variation or the strength of the finished yarn. Normally, the short-term variation in card sliver is lower than in any of the following processes. Thus, it seems that time spent trying to lower short-term variation in laps is wasted.

All drafting roll settings are important and this setting directly affects the irregularity of the processed stock. Probably, the most critical roll setting is between the first and second rolls on the drawing frame. Good card sliver can be ruined by poor drawing frame roll settings. In laboratory tests, drawing rolls have been set exactly on classer's length with no measurable damage being done

KINK CONTEST!

$100 will be awarded the winner.

Send your entry now!

This contest ends November 15, 1953.

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, November 15, 1953.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance—no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously.

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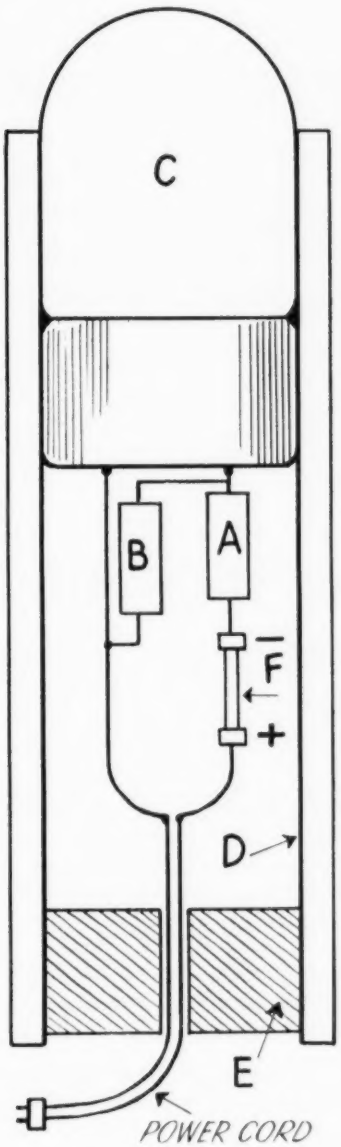
to the stock. The closer the setting is to the fiber length being run, the less likely will be the chance of periodic thick and thin places occurring in the sliver.

The draft distribution on multiple-zone roving frames must be correct, if irregularities due to roving drafts are to be held at a minimum. (Draft Proportionment, T. I. Dec., 1952, by Corley and Simpson; Drafting Long Fine-Fiber Cotton, T. I., March, 1949, by J. R. Corley). Correct roll settings and top roll pressure are a must here.

It is a well known fact that some drafting systems are capable of higher drafts than others. A processing organization which proportions drafts according to the efficiency of the various systems used will always produce the most uniform end product.

CONTRIBUTOR No. 8604



A—30,000 ohm ¼-watt carbon resistor
B—130,000 ohm ¼-watt carbon resistor
C—Type NE 48 ¼-watt neon lamp
D—Empty yarn tube
E—Rubber grommet
F—1N55 Germanium diode

Make This Stroboscope Yourself

EDITOR TEXTILE INDUSTRIES:

A simple pocket-type stroboscope may be easily assembled from an empty yarn tube and a few inexpensive parts obtained at a radio store. This unit will have extensive use in the mill. The stroboscope flashes on and off 60 times a second. Speeds of shafts or bobbins or any motions which are a multiple of 60 can be stopped by this stroboscopic action. For example, a bobbin on a spinning frame which is revolving at 7200 rpm will appear to stand still. Care should be exercised in making this unit (see accompanying illustrations); be sure negative terminal of 1N55 is not connected to one side of the power line.

CONTRIBUTOR No. 8585

More Help for Reader Having Trouble with 10 x 5-1/4 Roving Frames

Subject Briefed: CONTRIBUTOR No. *8533 related experience with 10 x 5¼ roving frames which gave trouble with ends running under or over when the rail changed direction. The condition was noted worse when the bobbin was three-fourths full. Other data were as follows: 950 rpm spindle speed; 55-gr sliver in creel; 1.31 twist multiplier; 14 coils per inch; English type builder.*

EDITOR TEXTILE INDUSTRIES:

Regarding CONTRIBUTOR No. 8533 and his trouble with the English

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DUOFOL is recommended for vat or pad dyeing, package dyeing and for dyeing operations in general to give greater uniformity of shade. Where wetting back effects are required, DUOFOL renders fabrics highly absorbent and imparts a soft, desirable hand. Concentrations of from 2 to 7 ounces per 100 gallons are sufficient for most applications.

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type fly frames running over or under, the replies by CONTRIBUTORS 8534, 8535, 8536, and 8537 have all given some of the things that will cause the trouble. Attention to several other details may also be helpful in the situation.

If frames are old, examine the set screws in lift gear (they were originally oval point), and if these are worn and will not hold, they may slip and cause the carriage to get out of level. Worn screws should be replaced with new ones.

Slots in spindles should be cleaned once each week. If lint is allowed to get packed into this slot, the flyer is raised, thereby causing individual ends to run over if steps are worn. Pressers have to be bent down to keep from running over top of bobbin. It is necessary to replace steps or install shims to bring them up in line.

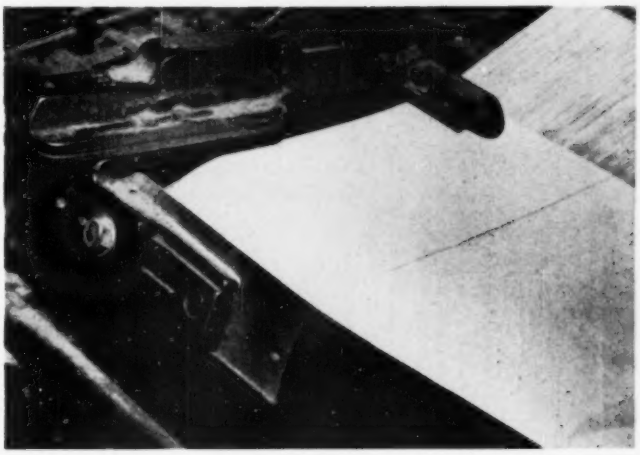
Provided that the tops of spindles are not worn too badly, have spindles retopped, check alignment of cones to see that they are in line; if they are not, tension will not be right at any point and will give trouble all through the doff, especially from the half full mark.

In most instances it will be necessary to replace all worn 70-tooth twin bevel gears on old frames. When these teeth become worn, the nose gear will fail to mesh when direction of carriage is changed and cause it to skip just enough to give trouble, a condition that is hard to trace.

As mentioned by other contributors, back lash is the cause of most of the trouble, and there is plenty of back lash in any spur tooth gear. The only remedy for this condition in the lay train is to replace all of the gears with helical or spiral gears. These gears eliminate 90% of the back lash or dwell and will permit the use of small taper gears which will help to get maximum stock on bobbin without run overs and tangled roving.

Balance weights should all be kept on at all times if not too much strain is placed on lift gear. Weight hanger bearings cause lots of hangers to be broken. When dry, this bearing is entirely too long for the oil hole in center to lubricate the ends. To overcome this difficulty, put an extra oil hole in each end.

CONTRIBUTOR No. 8605



Tinted Yarn Marks End Break

Tinted yarn is used to draw in broken ends on white goods in one large mill where quality is of primary importance. The tinted ends serve as a marker for cloth inspectors to check when inspecting the cloth for defects. Note the streak made by the tinted end in the accompanying illustration. The tint is removed when the cloth is processed in finishing.

Increase Your Slasher Drying Capacity with Heat Lamps

EDITOR TEXTILE INDUSTRIES:

Drying conditions on slashers can be improved by applying heat lamps in the proper location to aid in drying the yarn. A battery of ten lamps in a mill-made reflector trough is placed ahead of the large cylinder; the yarn passes through the size-box, over the heat lamps, around the large cylinder, around the small cylinder, then to the loom beam.

The battery of ten lamps produces approximately 84,000 Btu of heat in that they are 250-watt bulbs, and the application is estimated to be about 60% efficient, thereby applying approximately 50,400 Btu of heat to aid in drying the yarn. Several methods can be used to get more heat if desired:

(1) If the slashers can out-produce the other departments, they can be slowed down to allow the yarn to remain in contact with the lamp heat longer.

(2) There is enough room to place two batteries of lamps under the yarn, and two batteries above the yarn if desired, thereby increasing the heat to four times the amount given by one battery.

The only cost involved is that of

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- **available only from WHITIN**

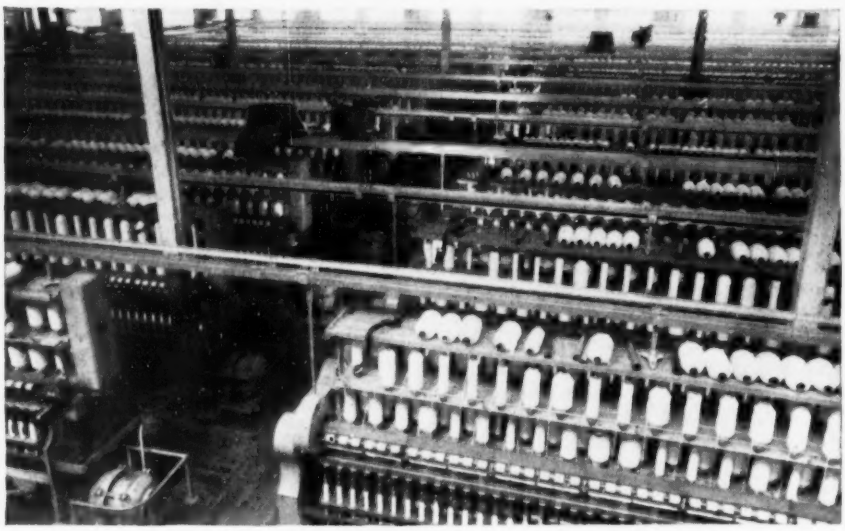

Photo of Spinning Room at Trent Cotton Mills, Trenton, Ont., where complete modernization of equipment brought increased efficiency, lowered costs and improved yarn quality.

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To increase draft ranges by as much as 50 per cent or more. Whitin supplies all parts needed *from original designs, accurately engineered,* and *precision-made,* including: new type cradles, aprons, gearing, gear covers, revolving clearers, weight levers, and back bar arms if required.

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LARGER PACKAGES — To provide larger packages, traverses can be lengthened and ring size increased. To insure successful application, the original specifications or frame dimensions are carefully checked and every new part required is furnished.

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For these and any other type of changeover such as for new frame drives, new creels, new head ends, etc., Whitin provides all necessary replacement parts, each authentic in design, made of the finest material, by the world's largest textile machinery manufacturer. Whitin suggests — Compare before you buy!

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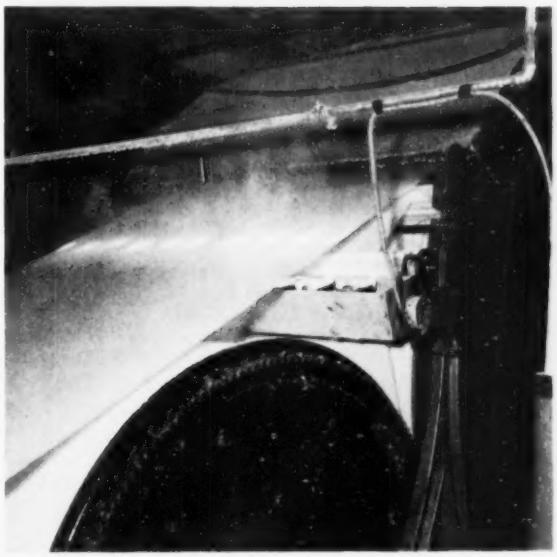
the lamp bulbs and labor. The other materials, such as sheet metal for the trough, wiring, and sockets can be found in the mill stock. The operating cost amounts to about 60 cents per bulb per month.

Another incidental advantage found in using heat lamps is that they appear to reduce sweating in the slasher department.

The accompanying illustration shows an installation of the heat lamps

CONTRIBUTOR
No. 8595



PARTIALLY DRIED YARN passes over battery of ten heat lamps in mill made reflector before contacting large cylinder.

"This Is the Way We Operate Our Knit Goods Dyehouse"

EDITOR TEXTILE INDUSTRIES:

Other mill men may be interested in the operating procedure we employ in our dyehouse. We think our method of operation is good, and should someone else think he has a better way of operating, we would like to hear about it because there is always room for improvement.

We use vat colors in dyeing all of our cotton anklets. Vat colors are expensive; therefore, we have to minimize the cost as best we can without sacrificing quality. It is our policy to establish a system for all different methods, colors, and dyes, depending upon the composition of the socks. What I mean by a system is to have written instructions for each dye lot.

When we get a new color to match, we select the most suitable dyes to produce the shade and dyes that will dye the best possible union on nylon reinforced heel and toe. Also, the dyes we select are level dyeing and have as near the same exhaust rate as possible. When we match a color the formula is checked on a small run of seconds, and care is exercised to weigh all the chemicals as well as the dyestuffs. On every run it is necessary to establish a specific temperature and the same water level each time.

We welcome all salesmen, listen to them, and then do what we think is best. In other words, it is not desirable or practical to change the processing procedure every time a salesman comes by with a different product. For instance if your formulas are set up with a certain retarding agent and you use a different one, chances are the lot will dye off-shade, which means the lot must be redyed and production as well as costs are affected unfavorably. In some instances, all of the profit on the goods may be lost by having to redye them.

We have found that it is a good idea to test the water two or three times a day to be sure it has the desired softness. Of course, all dyers know hard water can cause plenty of trouble, but the detail is sometimes overlooked.

It is essential to have the cooperation of the greystock clerk. He should be careful not to overload the dye nets and to always make up the lots to fit the machines. For instance, do not try to dye a 75-pound lot in a 100-pound machine where you have the same bath volume. In some instances some of the dyes exhaust more slowly than others; therefore, it is

Extend Wide Gear and Sprocket Life

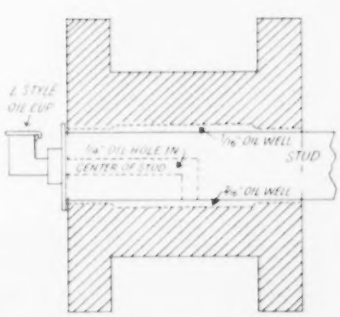
EDITOR TEXTILE INDUSTRIES:

On wide gears or sprockets, such as the double sprocket on the chain drive of a fly frame or the wide hub gears on a picker, much better service can be secured if an oil well is cut in the center of the inside bore of the gear (see accompanying sketch).

This modification on the gears has extended gear and sprocket service in our mill. A plentiful supply of oil is maintained where it is needed, and the only place the oil can go is to lubricate the parts.

We have less trouble with gears modified in this way, and we let them run twice as long between oilings as other gears.

CONTRIBUTOR No. 8589



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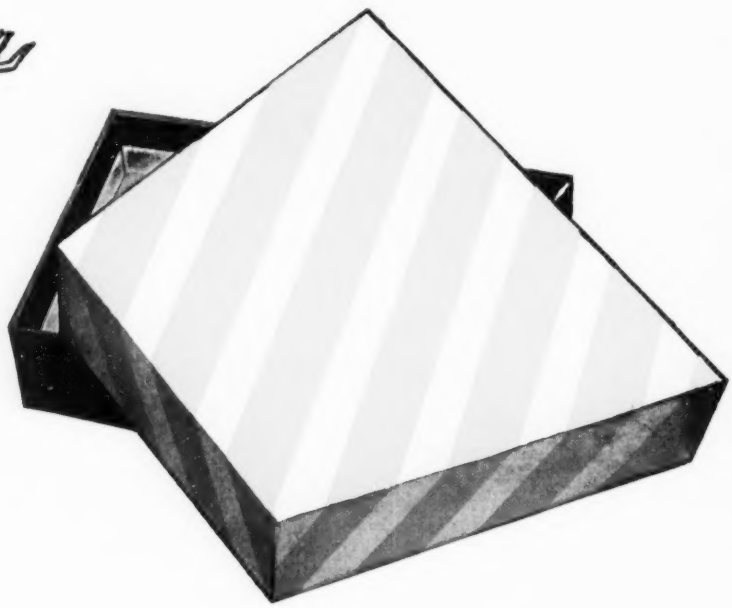

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necessary to increase the amount of slow exhausting dyes to compensate for the difference.

Our method of dyeing vat colors on cotton anklets is briefly as follows:

The bath is made up with

12% Caustic soda
4% Retarder L
2-4% Vat Oil 100
5% Corn sugar except where chlorine fast blues are present

We use 5% dextrin to protect the blue at a high temperature. The dyestuff is pasted with some of the boiling bath. Add dyestuff and run for three or four minutes after which the dry goods are entered. Run 15 minutes at near boil. Cut steam and allow to cool for 15 minutes or until the temperature is cooled to 180 F. Then add 12 pounds hydrosulphite slowly and run another 15 minutes in cooling bath. Turn on cold water and give a running wash for about 15 minutes or until the goods are free of caustic—then drop the bath.

In a fresh bath add 2% hydrogen peroxide, raise temperature to 160 F, add 2% Carbotex, bring to boil, drop bath, and rinse at 140 F. Finish with 1-2% Duramine 1282.

We have tried different methods for bleaching nylon but the best method we have found for our nylon anklets with cotton top, heel, and toe is as follows: The bath is made at 140 F with 4% Carbotex and 4% Marosolv. The goods are entered and run at this temperature for 15 minutes and then brought to a boil and run for 20 minutes. The bath is dropped and the goods are rinsed.

In a fresh bath add 10% chlorine bleach, raise slowly to 140 F, run 20 minutes, raise temperature to 180 F, and then drop the bath. In fresh bath add 1% acetic acid 56%. The goods are worked in this bath for three or four minutes before adding 0.005% Calcofluor White R. W. single (previously dissolved in a 10% sulphuric acid solution). Add 0.010% Pontamine White B. R. Raise slowly to 160 F, run 15 minutes, drop and rinse at 140 F. Finish with 2% Duramine 1282 at 105 F for 10 minutes.

CONTRIBUTOR No. 8515

Want to Make Longer and Better Picker Laps? Here's a Way

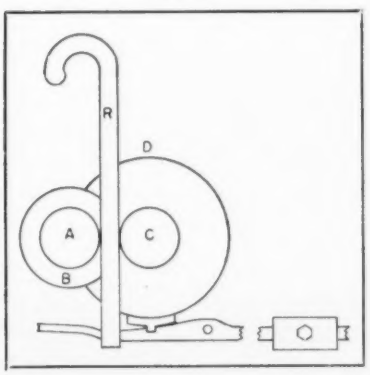
EDITOR TEXTILE INDUSTRIES:

We were far from satisfied with our picker laps. The laps appeared to be loosely wound and unrolled badly at the card. Also, the amount of lap waste at the card was excessive. We made a study of the lap end of our pickers in an effort to find the root of the trouble.

After studying the machines we came to the conclusion that the lap end of the pickers should be altered, and two alterations were made which improved the pickers to a remarkable extent.

Our lap ends are built in a conventional way (Fig. 1). The rack (R) is in gear with a compound wheel (A) (B), which is in turn geared to the brake drum (D) by the wheel (C). First we tried moving the weight to the far end of the lever to increase the pressure on the brake drum. This change had very little effect upon the density of the lap.

Fig. 1.



We noticed that the brake drum (D) and the rack remained stationary for long intervals. When the drum moved, it turned nearly half a revolution. This indicated that the pressure exerted by the rack on the lap reached a maximum and then suddenly turned the brake drum. After turning the drum, the pressure was reduced to a minimum.

Our first job was to reduce the difference between the maximum and minimum pressure on the laps by making the brake drum move a shorter distance and to make it move more frequently. This was done by making the surface of the brake drum rough by filing shallow grooves across the face. The rack now makes three times as many movements per lap as it did before the change was made.

Another defect was noted upon examining the laps. A slight crimpy effect was present on the inside of the lap sheet. No doubt this was attributable to the bending effect as the sheet was turned in a circle. The smaller the circle (diameter of the lap), the more pronounced the crimp.

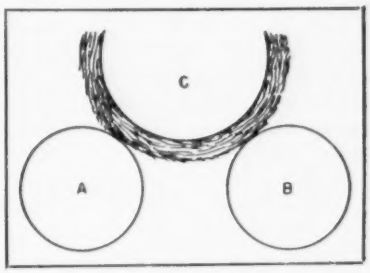


Fig. 2.

In the accompanying sketch (Fig. 2), (A) and (B) are the lap rollers, and (C) is the cotton sheet. The inside of the circle must be smaller than the outside, the difference between them depending upon the thickness of the lap and the diameter of the circle. In other words, there is more crimp in a heavy lap than in a light one, and there is more crimp at the beginning than at the end.

To overcome the problem, we

"Equipping" Looms with Pays Off in Lower

More and more mills are realizing the importance of using only products proved best over the years to "equip" their looms. That's why so many choose Dayton Thorobred Loop Pickers, Dayton Thoro-Checks, and Dayton Lug Straps. Choosing the RIGHT product for the job cuts loom maintenance costs, reduces down time, and ups production.

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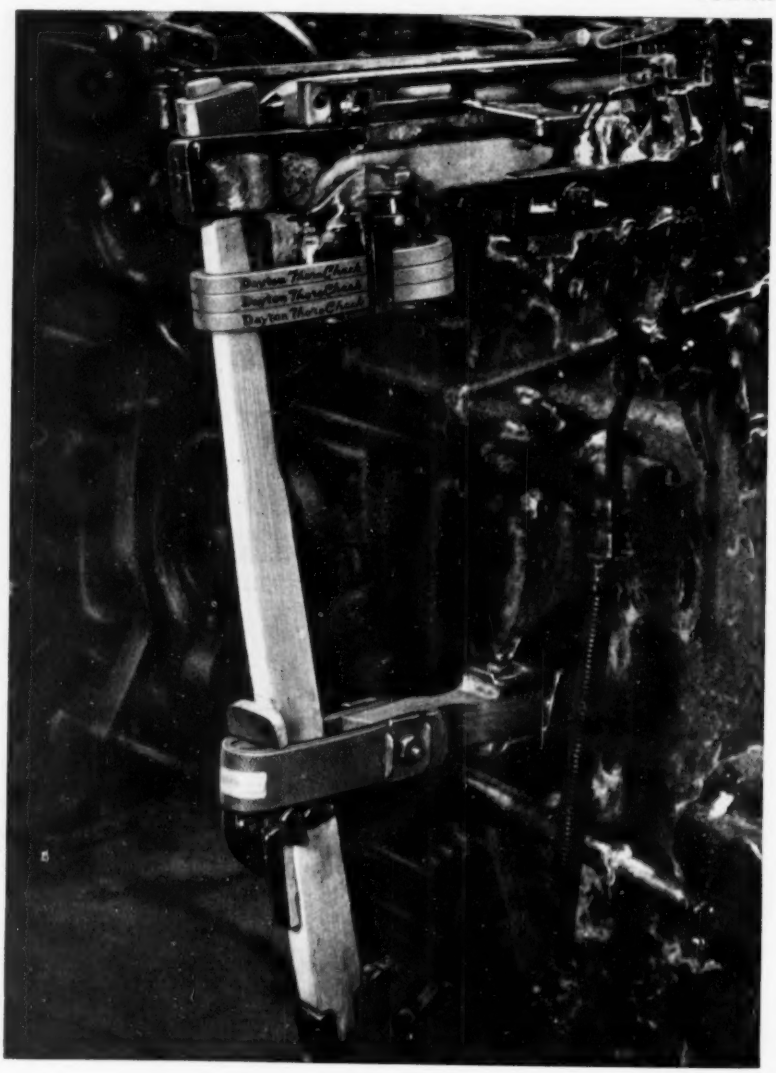
Dayton Pickers Insure Smooth Shuttle Throw

Dayton Thorobred Pickers are specially designed and built of exacting materials to stand up for long periods under the pounding of high-speed shuttles. In fact, they often last twice as long as ordinary pickers.

Because of the slight tilt with which the picker has been designed to fit the stick, there is always perfect shuttle contact. As a result, Dayton Thorobred Pickers keep their shape, stay put on the picker stick, and practically eliminate jerked-in fillings. Also, looms can be boxed the same at all times.

There are other advantages too. Dayton's front edges are rounded to eliminate hanging filling; its narrow back permits free non-wear on the lay-in strap; and the flared bottom saves time when applying it to the picker stick.

These are just some of the reasons Dayton Thorobred Pickers keep picker costs down as well as overall loom maintenance. Try them yourself.



The mill that operates this X-2 loom believes in keeping costs down. That's why their looms are equipped with Dayton Thorobred Pickers, Dayton Lug Straps, Dayton Thoro-Checks, and Dayton Hold-ups.

Only The Best Maintenance Costs

Dayton Thoro-Checks Reduce Strap And Picking Motion Costs

The amazing Dayton Thoro-Check is a strap that really pays off in big savings. Here's one example that is typical of many installations. In a big southern mill Dayton Thoro-Checks were installed on X-2 looms. Since then they have seen 5-day week, round the clock operation, for over 9 months. And they're still in service. Old type straps lasted only two or three months on these same looms. Yearly savings in this one mill alone are sizeable.

Here are a few reasons why Dayton Thoro-Checks are so efficient and economical. Since they're unaffected by temperature or humidity, and don't "grow," they need practically no adjustment. In the event failure occurs after long service, generally only one will break at a time, thus providing a safety factor not possible with one-piece straps. They may be replaced individually or in multiples.

You'll want to know more about Dayton Thoro-Checks. They're real cost cutters. Get the complete story today.

Built-In Cushion of Dayton Lug Straps Protects Picking Motion from Terrific Thrusts

To protect picking motion and keep loom maintenance costs low, lug straps should be installed that have proper cushion.

Such a strap is the Dayton Thorobred. It has exactly the right amount of cushion built into it to absorb the terrific thrusts of quick starts and stops, thus saving much wear and tear on the loom generally. Not only is the proper "give" tailored into Dayton Lugs, but they also have the ability to "come back" immediately.

Daytons are built strong for long life. There are special longitudinal cords of high tensile strength that transmit the thrust without fatigue. Also, they're built with a molded-in plug, all in one piece. There are no parts to work loose. So strong is this construction that in competitive tests Daytons outlasted every other type tested.

Investigate the advantages of Dayton Lug Straps for yourself. Learn what other mill men have found—that you can save time and money with Daytons. Today, perhaps more than ever before, it is important for all mills to keep maintenance expense as low as possible.

That's why many are finding that it pays to equip looms with only the best in pickers, lug straps, check straps and auxiliary parts. Dayton Thorobred Loom Supplies have been proven over many years for their outstanding ability to keep maintenance expense and replacements at a low level.

If your looms are not Dayton equipped, get in touch with your Dayton Loom Supply Jobber at once. Or write Dayton Rubber direct. You'll *save*.

PRODUCTS FAMOUS FOR LONG, EFFICIENT SERVICE

The Dayton Thorobred Loop Picker is the leader in its field. It will "outpick" any ordinary picker on the market.

The Dayton Thorobred Deluxe Lug Strap can take millions of flexings, millions of blows without fatigue.

Dayton Thoro-Checks bring greater savings, safety, and efficiency to loom operation. A revolutionary development.

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Seal of Achievement

In the last fifty years we have witnessed—and made significant contributions to—the technical progress of the textile industry. Continuous cooperation between this industry and our research and field staffs is the key to our successful development of an impressive group of efficient products for textile application. Following are a few of those which we feel have earned our Seal of Achievement:

***ALGEPON V A®** Auxiliary for use in dyeing vat colors to retard reoxidation of the reduced bath with consequent production of a full, uniform shade;—also effective in stripping vats and naphthols.

***ANTHOMINE®** Auxiliary for wool dyeing, produces full even shade and soft hand in stock, yarn and cloth—excellent for tippy wool.

ARIPERM P M® Protects dyed acetates from atmospheric gas fading. May be applied directly in dyebath or on quetsch as a finish.

ARKOIL EMULSION Appropriate blend of vegetable oils for use as a stock lubricant in carding and spinning cashmere, angora and fine wool yarn. Contains no mineral oil and scours completely out of the yarn or subsequent fabric with minimum mechanical action.

ARKOLENE® A group of very fast wetting out and penetrating agents. Used in wetting out, carbonizing, dyeing and finishing baths where rapid and complete penetration of the liquor is desired.

CENATOL H S Naphthol dyeing auxiliary for hot method of naphtholating. Insures a clear bath without use of alcohol.

CULOFIX® Dye fixative designed to prevent color migration and bleeding of direct dyeings. Also imparts a soft, pleasing finish.

***DERGON O M®** Highly concentrated nonionic detergent that is very effective in replacing soap in scouring wool, yarn and pieces.

HYDRO-PRUF® Durable silicone water repellent. Produces exceptionally high spray ratings on many types of fabrics that withstand numerous washings and dry cleanings, without substantial loss of water repellency.

KERANOL N K® Produces a durable soft, mellow hand in wool, cotton and rayon fabrics. Resists yellowing during storage and can be used in alkaline, neutral or acid finishing baths or with resin finishes.

***PARAMEL G T®** Outstanding softener for finishing cottons, rayons and synthetic blends. Excellent resistance to yellowing.

***PARAMINE®** A cationic substantive finish that is used to impart fullness and increased softness to synthetic and natural fibres.

PARAPON S A® Exceptional leveler for dyeing operations where it is difficult to obtain a uniform, full shade. Particularly useful in dyeing acetate fabrics for dispersing the color and as addition to dyebath for even shade throughout the pieces.

VARKON F P® Metal sequestering agent that is particularly effective for overcoming troublesome iron contamination of dyebaths. Assists in production of bright full shades.

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increased the speed of the front lap roller by reducing the gear from 39 to 38. The back roller was left unaltered. In effect, the front roller is revolving 2.56% faster than the back one, although the lap rests on both rollers. This produces a slight draft on the outside of the sheet and prevents crimping on the inside. The lap is also wound much tighter than it was formerly.

By putting grooves in the brake drum and changing one wheel on the picker as described, we have been able to increase the length of our laps from 43 to 47½ yards. The laps are firm, unwind better at the card, and there is less soft waste to be reworked.

CONTRIBUTOR NO. 8548

Sliver Reducers Give More Time for Cleaning Cards

EDITOR TEXTILE INDUSTRIES:

Much has been said about sliver reducers on cotton cards. We have several of the devices in operation on our cards, and I should like to tell other mill men what we have learned from actual experience.

The sliver reducer is an attachment which increases the pressure on the calender roll. The increased pressure causes the sliver to be approximately one third smaller than it would be without the reducer. We are able to put about one third more sliver in each drawing can, thereby increasing the card doffing interval.

For example, if we were formerly doffing our cards once each hour, the sliver reducer permits us to doff them at 1½-hour intervals. The card is not stopped for doffing, either with or without the reducer.

If each card tender formerly had 27 cards, the additional time permitted between doffs allows the carder to operate more cards. The additional number of cards would depend upon how much extra time the carder has. We found that instead of giving the tender more cards to run, quality could be improved by requiring the tender to run his job better.

Now the card tenders have more time to keep the cards cleaned and the floors swept. Clean cards will make clean work; dirty cards leave clearer waste and dirty lint in the sliver, and the foreign matter produces gouts in the yarn made in the spinning department.

The additional time allowed for cleaning is more than enough to repay the cost of the reducer (cost

Material: Caustic solution—for use in mercerizing machines.
Problem: Rotary pumps wore quickly, lost capacity, and had too little suction.
Solution: Moyno pumps cut maintenance and repairs to minimum—had ample suction for drawing caustic through the cloth.

Material: Textile Starch Sizing.
Problem: Other positive displacement pumps broke down starch; needed frequent maintenance.
Solution: Moyno pumps starch at 25 p.s.i. with no churning or turbulence. Pump maintenance has been reduced to minimum.

Material: Size—china clay and latex.
Problem: Centrifugal pump unable to handle viscosity—causing frequent trouble.
Solution: Moyno pump has been on duty for a year. Pump trouble completely eliminated; no repairs.

Material: Chromic Acid.
Problem: Material hard on pumps—being slightly corrosive and abrasive.
Solution: Moyno pump on duty for the past two years; has required practically no maintenance. Customer very well pleased.

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Trouble-Free — self priming; won't cavitate or vapor-lock. Just one moving part—no valves to stick, no pistons to gum up. Built for tough service. Easy to maintain.

Looking for a pump with a fast-growing reputation for solving tough problems? Take a look at the simple, versatile Moyno!

Briefly described above are a few of the many successful case histories proving how Moynos handle jobs where other pumps failed. Why is the Moyno a "problem-solving" pump? For one thing, because it differs completely from conventional pumps—rotary, centrifugal or piston. Just one rugged moving part—a rotor turning within a stator—does the job.

If *you* have a pumping problem caused by abrasive or corrosive materials—watery, viscous or even semi-solid—find out if the Moyno can help you! Mail the coupon.

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is very low); furthermore, we have increased efficiency on drawing frames. Our sliver goes directly from cards to drawing, and the cans of reduced sliver run in the drawing frames 1/3 longer, thereby giving the drawing tender more time for cleaning or running more frames.

We have found that the reducer has produced no apparent effect on the quality of the sliver.

CONTRIBUTOR No. 8449

This Parts Supply System Works if Everyone Cooperates

EDITOR TEXTILE INDUSTRIES:

A good parts supply system should be of help to many small plants. An adequate supply of parts should be maintained to prevent excessive downtime when a machine breaks down. The supply control system we use is not foolproof, but if everyone cooperates when using the stock room, the system should be valuable.

All bins in the supply room are numbered consecutively. Shipping tags are printed to show bin number, part number, part name, purchased from, date received, amount received, and reserve. On the opposite side of the tag appears the following notation:

"A reserve supply has been tied together and tagged. DO NOT USE THIS RESERVE SUPPLY UNTIL ALL LOOSE PARTS HAVE BEEN USED FIRST. When breaking into this reserve supply give this tag to your foreman who will give it to the supply clerk for reordering parts. Opposite the words reserve supply on tag, put the amount you believe is a fair reserve."

When a new supply of parts has been received, the supply clerk fills out a new tag and destroys the old one. The reserve supply is tied together, and the clerk places the parts in the bin corresponding to the number on the tag. When the supply man receives the old tag from the foreman, he has all the information needed to reorder a fresh supply of parts. From the date on tag, he can see just how long the amount received on last shipment lasted. This will give a good indication of how much to reorder.

This system has worked well for us and should work equally well for others, provided everyone cooperates.

CONTRIBUTOR No. 8606

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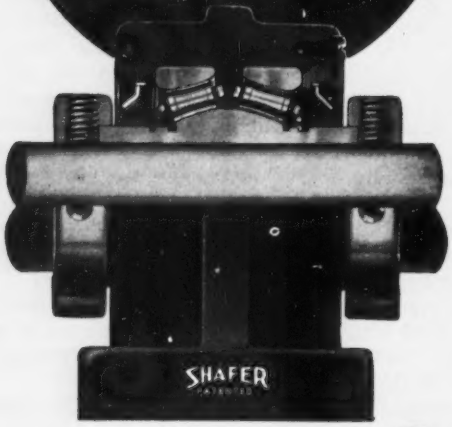

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Shafer Bearings handle these tough jobs better because they are engineered to-the-job—to provide *longer* life, *greater* dependability and *lower* operating costs under the severest working conditions. Integrally self-aligned, they have full radial-thrust and greater reserve shock load capacities under all conditions of misalignment; are equipped with self-centering "Z" housing seals and Micro-Lock 12-point adjustment. See the Shafer bearing specialist near you . . . or write us direct . . . for complete information and engineering consul on a no-obligation basis. SHAFER BEARING DIVISION • Chain Belt Company, 801 Burlington Avenue, Downers Grove, Illinois.

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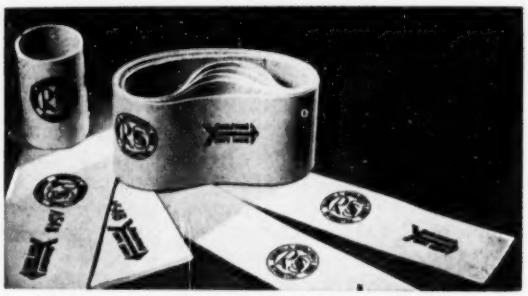

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Two Southern mills just completing six-months tests with Singleton Treated Leather Aprons have just reported a 50% reduction in "ends down." (1st mill on Gwaltney, 2nd mill on Dual Aprons). A third mill reports that one set of Singleton Treated Leather Aprons outlasted two sets of rubber aprons.

Singleton Aprons do last longer—they have a longer **effective yarn life**—a more lasting control over the evenness of yarns produced—than any other apron made today.

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Pleasing in their self-shades... fully satisfying in combinations. Naturally, the AMANTHRENE colors are equally well suited for DYEING cotton and rayon fibers.

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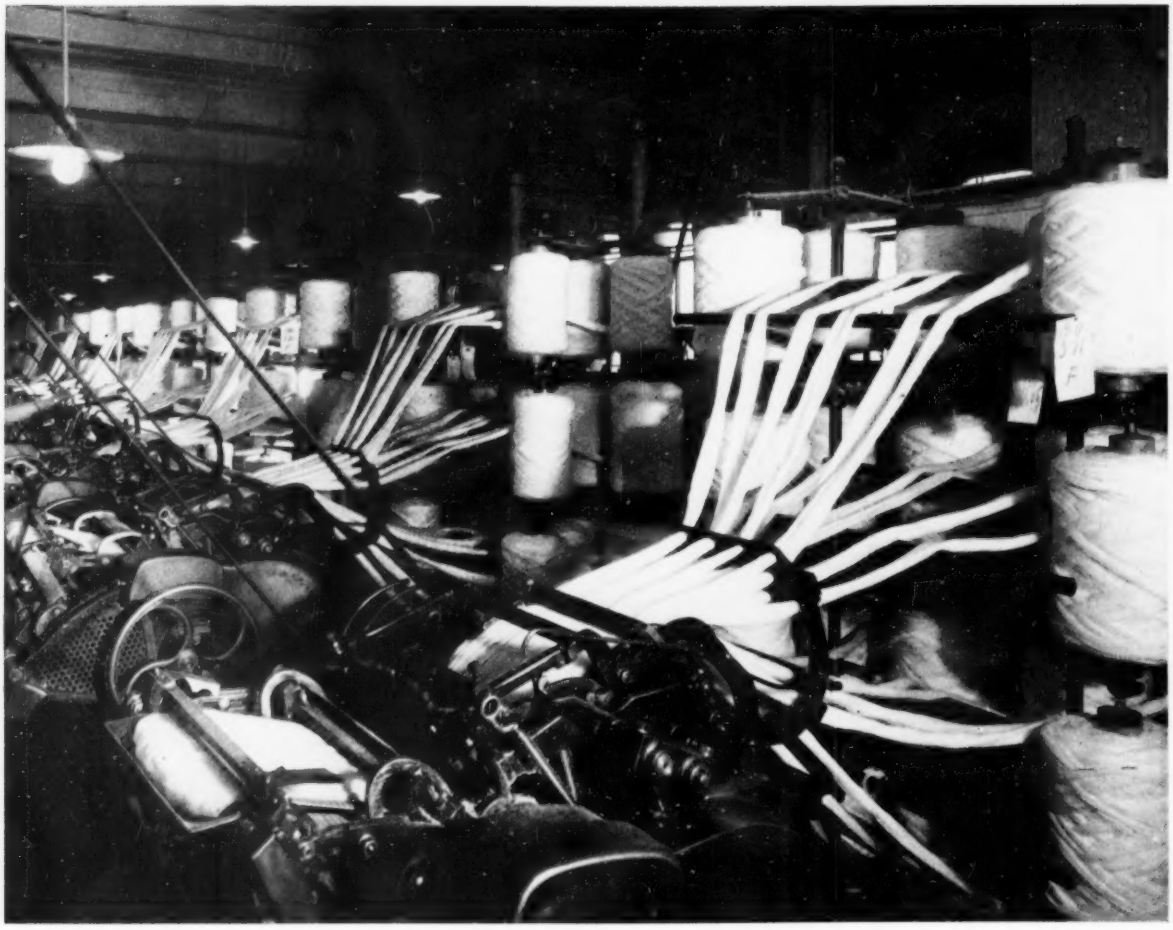

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Standard Oil Company
(KENTUCKY)

STANDARD OIL
LUBRICANTS

News in Brief

(Continued from page 113)

tors which have contributed to the decline in sheep numbers and wool production in the U. S.

Carded Yarn Association Meet. The annual convention of the Carded Yarn Association will be at Grove Park Inn in Asheville, N. C., October 29 and 30, according to Owen Fitzsimmons, executive vice-president of the group.

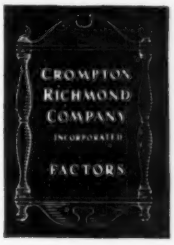
Scholarships Awarded. $18,000 in scholarships went to nine high school graduates, class of 1953, on June 1. The 4-year New England Textile Foundation scholarships were valued at $2,000 each, and the award winners have signified their intention to enter New Bedford Textile Institute. They are: Miss Barbara A. Staron, New Bedford, Mass.; David M. Hannon, Andover, Mass.; Paul Daniel Donovan, North Andover, Mass.; Leonard Lifland, Brooklyn, N. Y.; Hyman Cohen, Brooklyn, N. Y.; Albert J. Weil, New York, N. Y.; Henry B. Mason and James B. Devine, both of Lowell, Mass.

Perkin Centennial. 1956 will be the 100th anniversary of the discovery of the first synthetic dye by Sir William Perkin. The American Association of Textile Chemists and Colorists is planning to sponsor at its annual convention to be held in New York that year a commemoration of that important event in the textile industry. The cooperation of other interested technical societies will be sought.

Change Depreciation Standards? Secretary of Commerce Sinclair Weeks recently stated that standards should be changed so that "the shorter years of obsolescence rather than the longer years of wear-out will be the standard of depreciation." The administration is now studying this problem to see what changes should be made, according to Mr. Weeks.

Glycerine Research Award. The Glycerine Producers' Association has announced the second annual Glycerine Research Award competition. Awards will be presented at the next Association Convention in January 1954. The awards of $1,000, $300, and $200 respectively serve to recognize outstanding research in the application of glycerine or glycerine derivatives during the current year.

More German Stockings. East German exports of Perlon stockings are expected to be between four and five times the quantity last year, the 1953 estimates indicate. Twenty denier monofilament stockings are expected to play an important part in this export drive. Overall reduction in the prices of German textiles is continued, according to reports, and the trend is particularly noted in Perlon stocking prices. Compared to 1952 prices, a 30% reduction is noted for



The Human Factor

Hold On To Your Own Business

If you need more cash to handle the additional business coming to the South — why seek outside investments which become your partners by direct or remote control?

When Crompton factors you — the business belongs to *you*. We merely take over your accounts receivables, your collection chores, and the possible credit losses. We supply the cash immediately on shipment — and without recourse. We keep supplying it as long as you keep shipping. You're always liquid with Crompton Factoring. You're always free to go after the extra business coming to the South. And you always own your own business.

Representatives:
L. N. HUFFSTETLER, Box 605, Gastonia, N. C. • VON D. OEHMIG, Green Island Hills, Columbus, Ga.

CROMPTON-RICHMOND CO., INC.
1071 Avenue of the Americas, New York 18, N. Y.

SUPREME'S *two-part pattern for your* KNITTING PROFIT

Supreme's pattern for your profit is two-fold . . . providing better knitting performance plus helpful service.

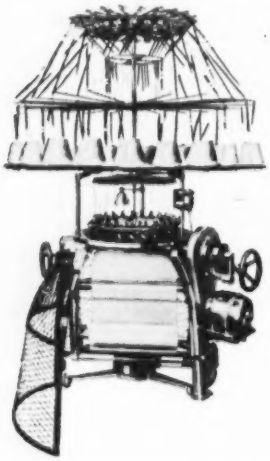
1. By combining multi-fabric versatility with super-speed production and low maintenance, Supreme machines assure you of maximum profit operation.

2. In addition, with every Supreme, you can get individual help on machine set-up, operation and maintenance, patterning, mill planning, etc.

Write for further information on any of the Supreme machines shown on this page.

PROFIT-KNITTING MACHINERY

For Example — Supreme's LRP



Supreme's new wonder-machine model LRP vent-knits open-stitch areas in a plain jersey background—produces air-cooled, run-resistant and elastic fabrics in a variety of beautiful patterns. This amazing machine profit-knits at rates up to 28 yards per hour—rayon, cotton or other yarn combinations may be used—perfect for summer and underwear fabrics.

HELPFUL SERVICE

Supreme follows through sales with service. Whenever required, Supreme's technicians provide individual assistance to the knitter to help him get maximum successful results from his Supreme machines. Pattern planning and analysis, engineering and maintenance information, in-the-mill instruction for knitter mechanics, mill-planning guidance are regular features of Supreme's service.

Here's a Free Sample of Supreme's Policy of Service —SUPREME'S NEW FABRIC and MACHINE SELECTOR— Slide rule chart identifies fabrics produced on each Supreme model. Includes actual fabric swatches. Gives diameter, feeds, needles per inch and production rates. Write for your free copy.

SUPREME
KNITTING MACHINE CO., INC.
94-02 104th STREET, OZONE PARK 16, N. Y.
Southern Representative and Showroom:
The Malluck Co., 711 S. Tryon St., Charlotte, N. C.

SK-169

Comfort Underfoot

To afford operatives comfort underfoot, retard fatigue, and accordingly increase efficiency, the Tam O'Shanter plant, at Manchester, N. H., has installed a new type, low cost, perforated-corrugated runner matting.

Made of long-wearing corded rubber, the matting, known as Traffic-Tred and manufactured by American Mat Corp., also insures a slip-proof footing, thus preventing many accidents.

branded stockings.

Patents Issued. Patent No. 2,596,762 has been issued to Ideal Machine Shop, Inc., Bessemer City, N. C., upon application of Clarence J. Costner for a dynamic flyer balancing apparatus; Patent No. 2,602,471 to Price W. Morrison of Chester, S. C., for a selvage motion; and Patent No. 2,619,789 for a stop motion for twisters issued to Robbins Mills, Aberdeen, N. C., upon joint application of Thomas M. Ripley and Frank G. Powers, both of Aberdeen, and Carson C. Ellis of Pinehurst. Patent No. 2,601,229 has been granted to Floyd R. Schultz and Jacob R. Livengood, Jr., both of Concord, for an improved transparent hosiery inspection and mending form.

Employee Safety Manual. "Working Together for Safety" is the title of the National Safety Council's new employee rules manual. The 32-page booklet contains instructions in safe work habits applicable to employees in most plants. For samples and quantity prices, write to the council at 425 North Michigan Ave., Chicago 11, Ill.

Officers Rotate in NCC. A plan for rotation of the presidency of the National Cotton Council has been approved by the board of directors. Harold A. Young will continue to serve as president and chairman of the board of directors until his successor is elected at the annual meeting in February in Atlanta. Then, under the plan adopted, Mr. Young will become chairman of the board for one year.

Wool Blanket Production Up. The production of all-wool civilian

News in Brief

Do you get 10 YEARS' SERVICE from your take-up roll covering?

Many mills report using TEXALOX take-up roll covering by CARBORUNDUM for ten years continuously—*without replacement or showing evidence of wear.* Do you get that much service from the roll covering you're using now? Does it give you all the other valuable advantages TEXALOX covering offers? For example:

- **NEVER GETS SLIPPERY OR GUMMY**—outlasts other materials.
- **DOESN'T SHED**—as other paper coverings do.
- **CAN'T RUST**—as metal coverings do.
- **PREVENTS CHAFE AND CUT MARKS.**
- **WON'T WRINKLE OR LOOSEN.**
- **RESISTS OIL AND GREASE**—and never accumulates them.
- **NEVER LOSES** its even, gentle grip on the fabric.
- **ALWAYS DELIVERS** definite lengths of material.

If your present roll covering doesn't offer you these advantages, you'll want to try TEXALOX roll covering—created expressly for the textile industry by CARBORUNDUM. There is a TEXALOX roll covering for each textile type, from sheerest nylon to heaviest duck. It's easy to apply. Try it on your looms—see what an improvement it is over old style coverings. We'll send you a sample length, free of charge. Ask your CARBORUNDUM Distributor—or write Dept. TW 82-31.

TEXALOX
TRADE MARK
SURE-GRIP TAKE-UP ROLL COVERING
by CARBORUNDUM

"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, New York

82-31

Are retained lubrication and long bearing life vital?

here's how leading harvesting machine manufacturers secure them with NEEDLE BEARINGS

Torrington Needle Bearings are important design features on many harvesting machines because of their unique ability to retain lubricants, and because of their long service life.

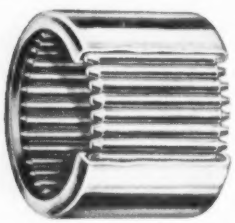
They have been *performance-proved* in machines which handle a wide variety of crops, on every type of soil and terrain—including combines, corn or cotton pickers, mowers and other miscellaneous harvesting equipment.

Needle Bearings in such machines are found in main drives, gearboxes, crankshafts, bell cranks, idler pulleys, sprockets, steering gears and various linkages. The small but rugged Needle Bearing has capacity for long life under punishing loads and severe operating conditions always present in the use of such equipment. Furthermore, the turned-in lips of the Needle Bearing's outer shell retain lubricants for long periods—reducing down time for relubrication to a minimum.

Needle Bearings have become "standard equipment" throughout industry since their introduction nearly twenty years ago. Their low cost, small size, and ease of installation make them the natural choice for increasing numbers of anti-friction applications.

Torrington Needle Bearings may offer a solution to your bearing problems. Our engineers will be glad to help you find out.

THE TORRINGTON COMPANY
Torrington, Conn. • South Bend 21, Ind.



TORRINGTON NEEDLE BEARINGS

Needle • Spherical Roller • Tapered Roller • Cylindrical Roller • Ball • Needle Rollers

Trade-marks of leading manufacturers of harvesting equipment who use Needle Bearings.

A-C · Massey-Harris · Oliver · GEHL · Ferguson · John Deere Quality Farm Equipment · Gleaner · Ford · Case · Kingham · FOX · International Harvester · New Idea · New Holland

blankets in 1952 increased 27% over the 1951 total, according to an announcement by The Wool Bureau.

Cotton Standards Conference Concluded. Delegates attending the 10th Universal Cotton Standards Conference, held in Washington, on May 13-15, examined and approved 1,169 boxes of the universal cotton standards. The standards will become effective August 15, 1953, and will be the basis for international trade in American upland cotton for the next three years.

Two Cone Ads Honored. Two 1952 advertisements for Cone Super-Spongy towels have been selected for the 32nd annual exhibition of the Art Directors Club of New York. At the conclusion of the exhibition at Grand Central Art Galleries, 300 examples of advertisements will go on tour throughout the United States and then will be sent abroad under the auspices of the State Department. In the fall, they will be published in a bound volume entitled "32nd Annual of Advertising and Editorial Art." These volumes have become the outstanding continuous history of editorial and advertising art in America.

Executive Views the News

(Continued from page 117)

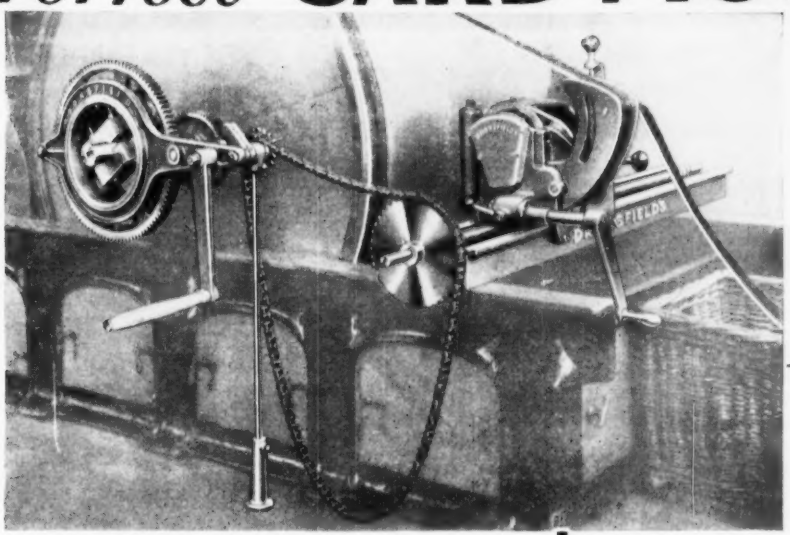
cisions must be made by the United States Department of Labor's Wage and Hour and Public Contracts Divisions, and some mills feared to ask the Department for a decision because a horde of government inspectors might descend upon their plants. In a bulletin distributed recently to its members, the American Cotton Manufacturers Institute attempted to clarify some of these problems through the quotation of decisions it had received from the Department of Labor in answer to specific questions.

It is difficult, and sometimes dangerous, to summarize in a few lines the administrative decisions of government agencies, but, all other requirements of the Act having been met, the following seem to reflect the opinions of the Department of Labor:

1. A yarn mill selling yarn to a weaver of broad woven fabrics is covered by the Act.
2. A yarn mill selling yarn to a weaver of narrow fabrics is not covered.
3. A yarn mill selling yarn to a knitting mill is exempt from the Act.
4. A grey goods mill selling cloth to a bleachery which is integrated with a weaving mill is covered by the Act.
5. A grey goods mill selling cloth to an independent bleachery is exempt from the Act.
6. An integrated spinning and weaving mill selling cloth to a shirt and trouser manufacturer is not covered by Walsh-Healey.

If you are confused by these answers, walk, do not run, to the nearest lawyer. We are confused too.

Perfect **CARD MOUNTING**



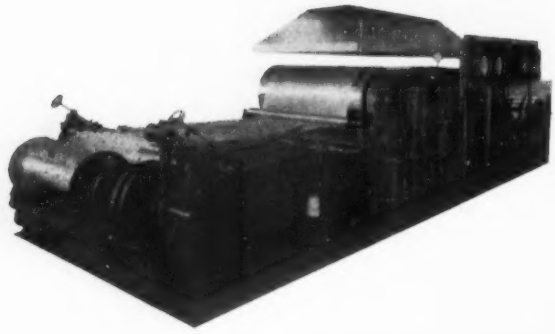
for
COTTON
WOOLLEN
WORSTED
WASTE
ASBESTOS
CARDS

Card Mounting Machine Nº 220 with Double Purchase Jack *for* clothing Card Cylinders and Doffers

SOLE AGENTS FOR DRONSFIELD'S MACHINERY:—
JOHN HETHERINGTON & SONS INC.
N. MARIETTA ST. EXT., GASTONIA, N.C.

DRONSFIELD BROTHERS LTD · OLDHAM · ENGLAND

Any Cotton Mill can make SEVEN *Substantial* SAVINGS



by replacing THREE COTTON SLASHERS *with* ONE JOHNSON All-Fiber Sizer

1. Labor can be conserved.
2. Steam requirements will fall.
3. Much floor space will become available for other uses.
4. Frequent parts replacements will no longer cause slow downs and expense.
5. Cotton warps will be better sized.
6. Loom production will increase.
7. Synthetics and blends can then be sized correctly.

AN ALL-FIBER JOHNSON SIZER in your mill will provide ideal equipment for sizing cotton, rayon, spun rayon, acetate, nylon, orlon, and other yarns at high production speeds.

Write for our 12-page, illustrated catalog. No obligation is involved.

Charles B. Johnson

MACHINE WORKS

PATERSON NEW JERSEY

New England: J. S. Fallow & Co. New Bedford, Mass.

Canada: J. S. Fallow & Co. 4846 Sherbrooke St., W. Montreal, Quebec, Canada

For the South: Lucas Associates, Inc. Charlotte 1, N. C.

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LATE BULLETINS

1-D Complete data to help you solve your paper tube problems. Overnight delivery of yarn and cloth paper tubes and boards. Shows how warehousing of these items can be avoided. Write Textile Paper Products, Cedartown, Ga.

2-D Information on new hand-dryer for Textile mill lavoratories, showing savings that can be effected. Write National Dryer Corp., 616 West Adams St., Chicago, Ill.

9-1 Fan Engineering Manual. Complete 64-Page guide to industrial ventilation and air movement. Engineering installation and operating data for all standard and special duty fan applications. Write for catalog #20, Aerovent Fan Company, Inc., 720 E. Ash St., Piqua, Ohio.

9-2 Shrinking and Drying Stenters. Bulletin shows advantages of VITS Shrinking and Drying Stenters, giving operational characteristics. Write Vits-Electro-GMBH., Maschinenfabrik, Dusseldorf 10, Germany.

9-3 Automatic Cleaning Equipment. Complete booklet by American MonoRail shows working details and advantages of the Tri-Rail Cleaner, a great improvement over the original unit. Write American MonoRail Co., 13107 Athens Ave., Cleveland 7, Ohio.

9-4 Eliminate Dye-Bath Shock. Data sheet by Foxboro shows how woven fabrics and hosiery may be protected from Crow's-feet, uneven shade, creasing caused by too rapid cooling of goods. Write for data sheet, 220-60, Foxboro Company, 487 Neponset Ave., Foxboro, Mass.

9-5 Harness and Dobby Sheaves. Specification Sheets listing 32 sizes and styles and Dobby Sheaves and 14 sizes and styles of Harness Sheaves. This is the first in a series. Write G. F. League Mfg. Co., New Buncombe Rd. at P & N Rwy., Greenville, S. C.

9-6 Overseaming Machine. Color booklet by Wilcox and Gibbs gives features of "World's fastest overseaming Machine." Operating principles, advantages and design presented in attractive form. Write Wilcox and Gibbs Sewing Machine Co., 214 West 39th St., New York 18, N. Y.

9-7 Fork Truck of the Future. Clark's new X-70 Fork Truck is featured in the new and current edition of their external house organ, the "Material Handling News." Schematic sketches illustrate special details of the new stream-lined truck. Write Clark Equipment Co., Industrial Truck Div., Battle Creek, Michigan.

9-8 Instruments for Modern Measurements. 34-Page book by Brush Electronics illustrates and describes over 37 different instruments, especially engineered for industry. Of special interest to mill superintendents and other production and research executives. Write Sales Promotion Dept., Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio.

9-9 Casters for Textiles. 12-Page catalog, containing many photographs and cut-away drawings of the Wil-Mat caster line for textile use, is now available. Special page shows how to select proper caster for both concrete and wood floors. Write Wil-Mat Corp., 2511 Wilkinson Blvd., Charlotte, N. C.

9-10 Ion Exchangers. Bulletin details a general history of ion exchange, gives data on proper selection of ion exchangers and lists general applications in the treatment of water. Write the Permutit Company, 330 West 42nd Street, New York 36, New York.

9-11 Fiber Glass Yarns for Insulation. Folder contains complete information on standard packaging, yarn specifications, and data on thermal conductivity, heat and acid resistance, moisture absorption, etc. Write Libbey Owens Ford, Fiber Glass Division, Toledo 3, Ohio.

9-12 Roller Bearing Spindle. Literature available on roller bearing Spindle made by Spindles, Motors, and Machines Ltd. of Switzerland. Write Gubelin International Corporation, 35 West 53rd St., New York 19, N. Y.

9-13 Textile Lubrication. "Lubrication" a magazine published by the Texas Co. is available. Shows methods and means of lubricating chain drives in very comprehensive form. Write The Texas Co., 135 East 42nd St., New York 17, N. Y.

9-14 Solenoid-Operated Lubricator. Bulletin describes Bijur's new lubricator which is readily adapted to many types of machines and offers wide flexibility of control. Attractive two-color folder may be had by writing Bijur Lubricating Corp., Rochelle Park, New Jersey.

9-15 Speed Reduction Units. 20-Page catalog by American Pulley gives dimensions of their line of "Shaft King" reducers. Shows dimensions of units, where used and how installed. Write American Pulley Co., 4200 Wissahickon Avenue, Philadelphia 29, Pa.

9-16 Cleanable Air Filters. Color booklet by Continental Air Filters, Inc. Gives General description of E-Z-Wash filters including performance data, sizes and capacities and method of cleaning. Write Continental Air Filters, Inc., P. O. Box 1647, Louisville 1, Ky.

9-17 Casters and Wheels. Brochure available from the Fairbanks Co., featuring the "Lockweld" caster without a king-pin. Single and double ball race swivel casters incorporating this unique construction are detailed in photos and description. Write The Fairbanks Co., 393 LaFayette St., New York 3, N. Y.

GOOD SIZING

PAYS

GOOD DIVIDENDS

IN

GOOD WEAVING

SPECIFY

CLINTON

TEXTILE STARCHES

MAKE GOOD WARPS BETTER

CLINTON FOODS INC.

CORN PROCESSING DIVISION

CLINTON, IOWA

Our modern tool techniques machine DIAMOND FINISH rings to extreme precision and so smooth they could almost be put in service without polishing. Because of this, our burnishing operation can be accomplished without altering the contours that have been carefully engineered to provide the most efficient traveler raceway.

WHITINSVILLE (MASS.) SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873

Southern Representative: W. K. SHIRLEY, 25 Oak St., Belmont, N. C.

MACHINE SEWING THREADS

Thomaston

HIGH SPEED
HIGH TENSILE
KNOTLESS

PEDIGREE
Top quality, knotless, high speed, rated by constant users as equal to or better than many combed threads. Particularly adaptable for high speed bag closing and multi-wall bag manufacturing.

ALSO MANUFACTURERS OF TIRE FABRICS • HOSE AND BELT DUCK • LAUNDRY TEXTILES • YARNS, LAMINATING FABRICS AND SPECIALTIES

ATLAS
Medium Grade Knotless Thread for high speed bag closing.

Thomaston Mills
THOMASTON • GEORGIA
NEW YORK OFFICE: 40 WORTH ST.

CHAMPION
Medium Grade Knotless Thread for Cotton and Burlap Bag manufacturing.

GENERAL, ECONOMICAL, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS —Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

7. RAYON TELLS ITS STORY TO THE PUBLIC —Folder containing reprints of advertisements explaining some of the many roles in which rayon is serving the American public.—AMERICAN VISCOSE CORPORATION, 350 5th Ave., New York 1, N. Y.

17. A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK—8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

18. FACTORING — Information available on how factoring works to aid client in keeping capital fluid and to avoid credit losses. Inquiries regarding these services welcome.—L. F. DOMMERICH & CO., 271 Madison Ave., New York 16, N. Y.

19. INDUSTRIAL BUILDING — A 32-page booklet, entitled "U.S.S. 12, U.S.S. 17 Stainless Steel Walls and Roofs for Industrial Buildings," is now available for distribution. This publication illustrates the use of type 410 and type 430 Stainless Steel Sheets in the construction of industrial and semi-industrial buildings. U. S. STEEL CO., 525 William Penn Pl., Pittsburgh 30, Pa.

20. VISION TESTING EQUIPMENT — Pamphlet entitled "What You Can Expect From a Good Vision Program" written by a prominent personnel director. Also circular describing the Keystone Occupational Visual Service. — KEYSTONE VIEW COMPANY, Meadville, Pa.

22. THE WONALANCET WAY — Is the title of an editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written. — WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

PLANT & PLANT MAINTENANCE . . .

101. TEXTILE DIGEST — 18-page manual reviewing performance-proved procedures for improved handling of more than 60 essential cleaning and related operations in textile mills. — OAKITE PRODUCTS, INC., 22 Thames St., New York, N. Y.

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said. — R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING — Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment. — AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

107. FINNELL SCRUBBERS—Illustrated leaflets describing and giving specifications for the Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

108. MAPLE FLOORING—Booklet describing finishing of Northern Hard Maple Flooring — list of MFMA approved heavy-duty floor finishes. — MAPLE FLOORING MANUFACTURERS ASSOCIATION, Pure Oil Bldg., 35 East Wacker dr., Chicago 1, Ill.

109. CARD STRIPPER — Portable dustless card stripper described in bulletin 1950. Advantages of dustless stripping when combined with thorough brush stripping. Used alone or with other systems discussed.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

111. INDUSTRIAL FANS — Catalog sheets with specifications describing the complete line of Murray Industrial fans for plant ventilation. Seven sizes described from 24" with 1/3 HP motor delivering 5700 CFM to 54" with 3-4 HP delivering 17,586 CFM with advantages of heavy gauge metal construction brought out.—H. C. BRGLIN CO., 177 Harris St., N. W., Atlanta, Ga.

113. COTTON MILL EQUIPMENT — This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

119. MOPPING EQUIPMENT — Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., 121 N. Aberdeen St., Chicago, Ill.

121. STEAM GENERATORS — Bulletin P-1 describes compact package type boiler for heating, power, or processing. Described as fully automatic, firing all liquid or gaseous fuels.—THE CYCLOTHERM CORP., Oswego, N. Y.

126. "SENTRY-LITE"—Bulletin illustrating and describing light unit that comes on automatically when power fails, illuminating 10,000 sq. ft. 8 hours or longer. CLEVELAND ELECTRIC CO., 557 Marietta St. N.W., Atlanta 3, Ga.

127. SOLENOID VALVES — Bulletin "V" lists sizes from 1/2 inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

129. AIR CONDITIONING AND HUMIDIFICATION — Catalog section 101 lists and briefly describes each item of the complete Bahnson line of equipment for textile mill air conditioning and humidity control. — THE BAHNSON COMPANY, Winston-Salem, N. C.

130. LIGHTING EQUIPMENT — Bulletin lists and describes the Crouse-Hinds line of lighting equipment which includes flood lights, searchlights, types of industrial lighting fixtures of vaportight dust-tight, and explosion-proof types. — CROUSE-HINDS COMPANY, Syracuse 1, N. Y.

131. "AIR PROCESSING" — Set of three bulletins showing real meaning of the term, where it can be used, the requirements for a successful system, etc. J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

133. PAINTING SPECIFICATIONS AND COLOR CHIPS—Industrial Paint and Color Guide, CC446, gives full painting specifications for exterior and interior of industrial plants with complete color samples. — THE SHERWIN-WILLIAMS CO., Painter Maintenance Div., Cleveland, Ohio.

135. COLOR CONDITIONING — Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid. — E. I. DU PONT DE NEMOURS & CO. INC., Finishes Div., Wilmington 98, Delaware.

137. PUMPS AND COMPRESSORS — Bulletin QP-11 presents the standard types of Gardner-Denver air compressors, centrifugal pumps, steam and power reciprocating pumps in a brief and comprehensive manner to enable the prospective user to select the size and type for specific needs.—GARDNER-DENVER CO., Quincy, Ill.

138. METAL CONVEYOR BELTS — Recent catalog describes and illustrates Ashworth's entire range of manufacturers, including the new Flat Wire Belt design and application, along with their Woven Wire Constructions and Positive Drive Chain Edge Belts. — ASHWORTH BROS., INC., Metal Products Div., Fall River, Mass.

139. STEEL SHOP EQUIPMENT — Write for profusely illustrated Hallowell folder describing line of shop desks, tool stands and carriers, cabinets, etc., adaptable to a wide range of uses. STANDARD PRESSED STEEL CO., Box 582, Jenkintown, Pa.

146. FUNCTIONAL GLASS BLOCK DATA — Folder shows in detail daylighting function of Light-directing and Light-diffusing Functional Glass Blocks. — PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.

149. ELECTRIC AUTOMATIC LEVER CONTROL —Bulletin F-4432 illustrates and describes Barber-Colman Automatic Electric Lever Control designed to regulate the level of solutions commonly used by industry. Ease of installation is emphasized. — BARBER-COLMAN CO., Rockford, Ill.

IT'S PURE LOGIC...

In modern time, when the success or failure of a mill depends so heavily on its technical knowhow, a mill man can't afford to overlook any source of information that may help him make his operation more efficient.

And TEXTILE INDUSTRIES is one of the best. It has been known for 54 years as the production and management magazine of the industry. So read your copy of Textile Industries to keep up with the latest technical advances . . . it's pure logic!

TEXTILE INDUSTRIES

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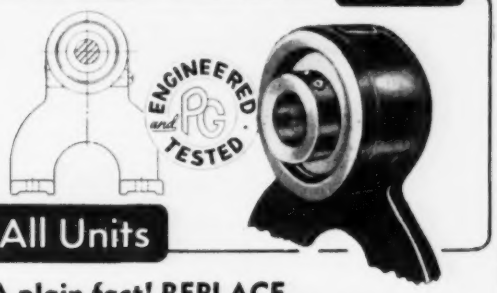

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153. LAMINATED TEXTILE PLASTICS—Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry. Write: SYNTHANE CORPORATION, Textile Division, Oaks, Penna.

154. AIR CONDITIONING FOR THE TEXTILE INDUSTRY — Booklet shows advantages of air conditioned mills in better products and more efficient workers, and gives values of White & Co., air conditioning in particular. Write WHITE & CO., INC., 1440 S. Tryon St., P. O. Box 533, Charlotte N. C.

155. DUCTLESS AIR CONDITIONING—24-page illustrated Catalog No. 2 on Amco humidification and ductless evaporative cooling, along with other Amco humidification devices. Contains relative humidity tables and textile regains.—AMERICAN MOISTENING CO., Providence, R. I.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, 2530 N. Second St., Minneapolis 11, Minn.

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169. MACHINE BRUSHES — Illustrated Folder shows many types of machine brushes and describing their particular use for printing, washing, brushing, singeing and shearing is sent free upon request. Write: INDUSTRIAL BRUSH COMPANY, INC., Woodside Avenue, Little Falls, New Jersey.

173. BLOWERS AND EXHAUSTERS — Bulletin NO. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full decription of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

179. BETTER WAYS — Form 2020, condensed catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Box 97, Toledo, Ohio.

181. AIR FILTRATION — Bulletin 234 describes and illustrates the Auto-Airmat, which is the Automatic Dry-Type air filter. Principle of operation, performance, characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

188. PROGRESSING-CAVITY PUMPS — A new principle on pumps. Self-priming, positive displacement, uniform flow features discussed. — ROBBINS & MYERS, INC., Pump Div., Springfield, Ohio.

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202. RELIANCE MOTOR — Bulletin C-130 on the explosion-proof, corrosive-resisting a-c motor. Design features exclusive with the new motor are enumerated and illustrated in the bulletin.—THE RELIANCE ELECTRIC & ENGINEERING CO., 1076 Ivanhoe Road, Cleveland, Ohio.

203. TREADED LEATHER BELTING — This 16-page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section.—E. F. HOUGHTON & CO., Philadelphia, Pa.

212. GATES TEXTILE ACCESSORIES — Handy pocket-size catalog BHM-7, fully illustrated, gives specifications of Gates textile accessories including pickers, lug straps, check straps, cone belts, evener belts, harness straps take-up roll covering and others. —THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

215. MOTORS FOR ROVING & SPINNING FRAMES — Booklet describes Louis-Allis soft-start textile motors. Gives charts showing speed torque curves, illustrating that a standard motor has too much standard Torque and too rapid acceleration. Write: THE LOUIS-ALLIS COMPANY, Milwaukee 7, Wisconsin, for Bulletin 801.

218. BALL BEARINGS FOR TEXTILE MACHINERY — A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing. — THE FAFNIR BEARING CO., New Britain, Conn.

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226. COTTON CARD DRIVES—Booklet B-4596 which describes Westinghouse individual cotton card drives. Through the proper design of card motors by Westinghouse, individual drive is now practical and the booklet gives full information. — WESTINGHOUSE ELECTRIC CORPORATION, P. O. Box 868, Pittsburgh 30, Pa.

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229. DODGE GENERAL POWER TRANSMISSION MACHINERY — Catalog describes various types of power transmission apparatus by Dodge. Gives specifications, sizes, applications, and prices. Gives comprehensive. Write: DODGE MANUFACTURING CORP., Mishawaka, Indiana.

230. HEAT RESISTING LUBRICANT — Descriptive pamphlet on Ben Roy High Heat Resisting Lubricant for use in any bearing using excessive amounts of oil or grease or frequent bearing failures. — GEORGIA-CAROLINA OIL CO., 1465 Sixth St., Macon, Ga.

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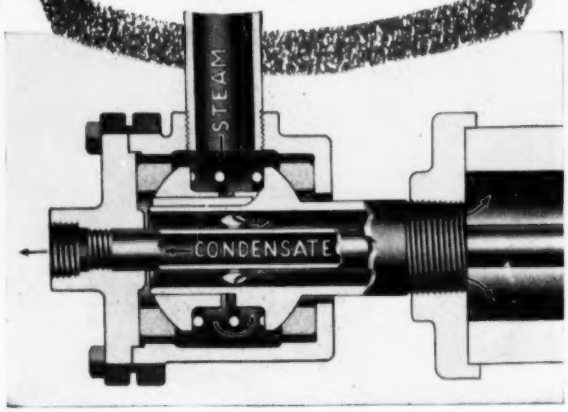

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237. MOTOR CONTROL — Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Users listed and advantages discussed. — CUTLER-HAMMER INC., Milwaukee, Wisc.

239. LICKERIN AND DOFFER BELTS — Brochure and full information on Lickerin and Doffer belts supplied by: TON-TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

254. LOOM RECONDITIONING PROGRAM AT TALLASSEE MILLS—Reprint of exclusive story on the loom reconditioning program at one of the biggest southern mills. This article shows how central lubricating system was built into each rebuilt loom as part of the improvement program. — BIJUR LUBRICATING CORPORATION, Rochelle Park, N. J.

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262. SMALL PRECISION METAL PARTS — Catalog by Torrington Company describes many special precision metal parts made by its Specialties Division. — Write: THE TORRINGTON COMPANY, Specialties Division, 500 Field Street, Torrington, Connecticut.

265. SERVICE PROCEDURE FOR BALL BEARINGS — A helpful manual for maintenance engineers giving helpful hints on disassembly, inspection, cleaning, lubrication, and replacement of ball bearings in any mechanism. — NEW DEPARTURE, Division of General Motors Corp., Bristol, Conn.

266. SILICONE LUBRICATION — Bulletin BG2-DC, describes properties of Silicone greases used in motors at high speeds and temperatures, on oven conveyors, tenter frames, can dryers, etc. Decrease by 10 to 1 in re-lubrication requirements described. —DOW-CORNING CORP., Midland, Mich.

277. SPECIAL TEXTILE MOTORS — Bulletin 51B6055A describes special features of "Quick-Clean" motors, including discussion on free air flow, pre-lubricates bearings, rigid cast iron frame and double insulation. — ALLIS-CHALMERS MFG. CO., Milwaukee, Wis.

INSTRUMENTS, STEAM SPECIALTIES

301. JOHNSON ROTARY PRESSURE JOINTS — Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices.—THE JOHNSON CORP., Three Rivers, Mich.

302. HYPERSONIC AND ULTRASONIC INSTRUMENTS — Illustrated catalog covering uniformity analyzer, acoustical measuring devices, and other non-destructive industrial measuring instruments. Illustrated brochure describing hypersonic equipment for both laboratory and pilot plant use in the field of ultrasonics.—BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio.

303. PROCESS CONTROL EQUIPMENT—Catalog containing brief description of standard and special process control equipment engineered for textile industry. Includes schematic diagrams. — MASON-NEILAN REGULATOR CO., 1190 Adams St., Boston, Mass.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips.—CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.

314. MOISTURE CONTENT CONTROL — Bulletin F-3156 giving details of features and benefits of moisture equipment control for slashers and textile applications.—BARBER COLMAN CO., Rockford, Ill.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

324. STROBOTAC — Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills." — GENERAL RADIO CO., Cambridge 39, Mass.

332. NEW INFORMATION ON INSTRUMENT GAGES — 24-page bulletin by Taylor Instrument Companies supplies considerable information on features, dials, and scales available to textile industry with excellent reference material on different types of actuation. — Write for: No. 98214, TAYLOR INSTRUMENT COMPANIES, Rochester 1, New York.

342. ACCURATE MEASURE — Booklet describing the Trumeter line of measuring machines for silks, cottons, linens, woolens, etc. Description and illustration of each machine with dimension diagrams and advantages of each machine.—THE TRUMETER CO., 1265 Broadway, New York, N. Y.

400. THE TRAVELER — Booklet on ring travelers published quarterly with a technical article o spinning and twisting of interest to mill men.—VICTOR RING TRAVELER CO., Providence, R. I.

CARDING, SPINNING, WINDING . . .

401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS — Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings. THE AMERICAN MONORAIL CO., Cleveland, Ohio.

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409. ROTO CONER—Bulletin describing Universal rotary traverse winder, known as the Roto Coner, producing open wound cones or knitting and warping; parallel tubes for package dyeing, twisting, and sale yarn.—UNIVERSAL WINDING CO., Providence, Rhode Island.

412. SERVICE FOLDER — Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

414. WORSTED SPINNING — Bulletin explaining and illustrating Saco-Lowell's new system for worsted

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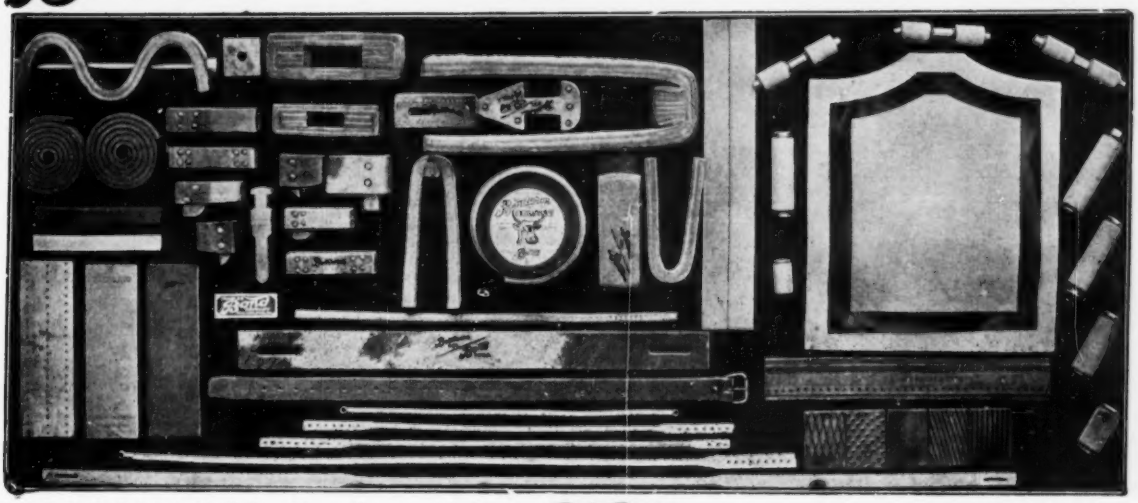

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418. PACIFIC CONVERTER—Graphic description of machine that cuts any synthetic tow; and when desired, blends it with wool or staple sliver, keeping the fibers parallel, and issuing an even sliver of accurate blend.—WARNER & SWASEY CO., Cleveland, Ohio.

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420. AUTOMATIC FILLING WINDING — Eight page, two color booklet describing the operation and mechanism of the Hacoba winder. — ATKINSON, HASERICK & CO., 211 Congress St., Boston, Mass.

421. CARD ROLL COVERS — Brochure describing the Davis Seamless Roll Covers. Lists advantages, specifications and offers free trial. — THE TEXTILE LABORATORIES, P. O. Box 1003, Gastonia, N. C.

422. MODERN TEXTILE ROLL COVERING — Illustrated booklet on roll covering problems with charts on correct usages. Also data on Acotex long draft aprons.—ARMSTRONG CORK CO., Industrial Division, TEXTILE PRODUCTS SEC., Lancaster, Pa.

430. DIXON DATA — Dixon house organ entitled "Dixon Data," which is available in a new form every other month. These house organs contain information on spinning problems as they relate to saddles and component parts.—DIXON LUBRICATING SADDLE CO., Bristol, R. I.

435. DOUBLE DECK TWISTERS — Bulletin describes Jumbo (8 oz. to 16 oz. headless or take-up spool packages) and Acme (up to 10 oz. packages) models for high speed twisting of silk, rayon, nylon, etc., to finest deniers.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

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437. SPINDLE TAPE LACING EQUIPMENT—Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes.—CLIPPER BELT LACER CO., Grand Rapids 2, Mich.

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445. ROLLER BEARING SPINDLES—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described. — THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

446. WINDING MACHINES — Principles and Practices is the title of Bulletin No. 339, Part 2 on the No. 44 Roto-Coner is profusely illustrated with exploded view drawings with charts and tables relative to drum winders.—UNIVERSAL WINDING CO., Providence, R. I.

447. CONE WINDER — Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

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461. PRECISE WIND MACHINE — Form A-92 describes the Foster Model 75 widely used for winding straight or pineapple cones and tubes of rayon, nylon and other filament yarns.—FOSTER MACHINE COMPANY, Westfield, Mass.

462. TEXTILE MACHINERY PARTS CATALOG—A 24-page illustrated catalog describing the complete line of Dayco and Thorobred textile machinery parts including Cots, Aprons, Loop Pickers, Lug Straps, etc.—DAYTON RUBBER CO., Dayton, Ohio.

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468. BALL BEARING TOP ROLLS — Bulletin features top roll for Spinning and Roving Frames with sealed lubrication, interchangeable units, low-cost servicing and precision quality.—Write: FAULTLESS CASTER CORPORATION, Textile Equipment Division, Evansville 7, Indiana.

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470. TENSION CONTROL IN TEXTILES—Booklet describes many applications and advantages of Link Engineerings' "Lod-Caps." Well-illustrated with diagrams and pictures, it gives specifications and capacities. — Write: LINK ENGINEERING COMPANY, 13343 Elmira Avenue, Dept. D, Detroit 27, Michigan.

471. FACTS ABOUT YOUR FLYERS AND SPINDLES—Booklet by Ideal Machine Shops shows how smooth Flyer and Spindle operation can help produce higher and more efficient output, good quality yarn, minimum wear, and larger bobbins.—Write: IDEAL MACHINE SHOPS, Bessemer City, North Carolina.

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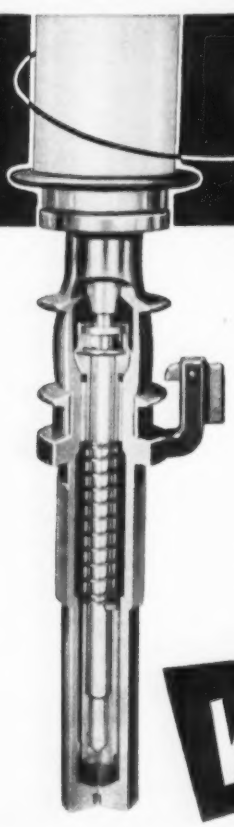

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509. MULTI-MOTOR SLASHER DRIVES—Booklet designed to bring the descriptive information on multi-motor slasher drives up to date, and emphasize the improvement in the drive through the use of Rototrol for the control of winding tension.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

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518. NIAGARA TWIST-SETTER — Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy. — SEYDEL-WOOLEY & CO., 748 Rice St., Atlanta, Ga.

521. STEEL WARP BEAMS — 20 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties. — MILTON MACHINE WORKS, INC., Milton, Pa.

524. JOHNSON WARP SIZES—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis. — CHARLES B. JOHNSON MACHINE WORKS, Piercy & Holsman Sts., Paterson, N. J.

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530. ROTARY UNIONS—New catalog shows how to cut costs, get better sealing, on can dryers, slashers, calenders, etc. Catalog No. 500 entitled "Where Good Connections Count."—PERFECTING SERVICE COMPANY, Atando Ave., Charlotte, N. C.

536. HOMOGENIZER IMPROVES SLASHING — Pamphlet by Manton-Gaulins Manufacturing Company shows how mechanical conversion of size by the Gaulin method produces better size. Gives installation pictures and specifications. — Write MANTON-GAULIN MANUFACTURING COMPANY, INC., Everett, Massachusetts, U. S. A.

537. WEST POINT'S HOT AIR SLASHER — Bulletin describes advantages and capacities of new hot air slasher by West Point Foundry and Machine Works. Detailed specification included.—Write WEST POINT FOUNDRY AND MACHINE WORKS, West Point, Georgia.

DYEING, FINISHING CLOTH ROOM

605. CONTINUOUS AUTOMATIC EXTRACTING MACHINE — Folder describing the most efficient method of extracting excess liquid from fibrous materials.—C. G. SARGENT'S SONS CORP., Graniville, Mass.

606. HYDRAULIC POWER UNITS — Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Pre-Boarding and Automatic Boarding Machines for hosiery.—PROCTOR & SCHWARTZ, INC., 7th and Tabor Rd., Philadelphia, Pa.

615. HIGH PRODUCTION EXTRACTOR FOR RAW STOCK—YARN—HOSIERY — Descriptive bulletin and full information on automatic Twintainer Extractor with bottom-unloading removable baskets. Machine replaces three conventional extractors, lowers labor costs.—FLETCHER WORKS, INC., Philadelphia, Pa.

616. FINISHING DRIVES—32 page booklet covers complete drives Westinghouse has engineered for the textile finishing industry. Describes all types of finishing ranges, discusses advantages of Westinghouse drives for these installations. "Packaged" drives for batch processes covered.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING—Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

620. REGENERATION OF ZEOLITE WATER SOFTENERS — Booklet explains advantages of International's Lixate Process in regeneration of zeolite water softeners. Shows how it cuts costs and does a better job.—Write: INTERNATIONAL SALT COMPANY, INC., Scranton, Pennsylvania.

622. DYEING OF ORLON, DACRON, AND ACRILAN — Three booklets by Sandoz deal with Orlon dyeing, fastness of Dacron, and general preparation of Acrilan goods for dyeing.—Write: SANDOZ CHEMICAL WORKS, 61-63 Can Dam Street, New York 13, New York.

623. SELVAGE GUIDER—The Marshall and Williams positive overfeed and selvage guider is described in a brochure as being developed to meet the most modern requirements of the textile finishing industry. Full description, pictures and advantages discussed. — MARSHALL AND WILLIAMS CORPORATION, 46 Baker Street, Providence 5, R. I.

632. LUG STRAP WASHERS — Series 1-C illustrated bulletin detailing right and wiring application and use of washers.—E. H. JACOBS NORTHERN DIV., Danielson, Conn.

635. TWO BURNER VERTICAL SINGER—Described as consisting of adjustable tension device, air guiders (optional), guide rolls to guide cloth between the burners, and solenoid-controlled pneumatic-cloth deflector to move cloth from burners when stopping and throws in electrically when starting. Pictured and fully discussed.—BIRCH BROTHERS INC., 32 Kent St., Somerville 43 Mass.

641. PACKAGE DYEING — Machine for dyeing extracting, and drying yarn in package and on beams described in illustrated booklet on the theory of package dyeing and equipment for this process.—SMITH, DRUM & CO., Philadelphia 33, Pa.

651. IMPROVED SHEARING OPERATIONS — The Slack Selvage Eliminator Bulletin describes this Mount Hope machine, and discusses the speed-up in shearing operation and the elimination of cutting of the material due to slack selvages.—MOUNT HOPE MACHINERY COMPANY, 15 Fifth St., Taunton, Mass.

DYESTUFFS, CHEMICALS, SOAPS . . .

700. COTTON FINISHING OILS — New booklet by Twitchell devoted to finishing Sanforized Fabrics contains such specific data as re-wetting speed, imparted softness, resistance to yellowing, and "balances" of these properties. — Write: EMERY INDUSTRIES, INC., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

702. DEFOAMERS—Bulletin AA-2 lists uses and properties of Antifoam A, which can be effectively used at 10 to 200 ppm in most industrial applications. Emulsions available, improve dispersability in aqueous systems.—DOW-CORNING CORP., Midland, Mich.

705. THEORETICAL AND APPLIED SILK-SOAKING — Attractive 23-page booklet outlining methods of silk-soaking and outlining investigation on the soaking, back-winding and degumming of silk. — HART PRODUCTS CORP., 1440 Broadway, New York 18, N. Y.

706. RHONITE RESINS — Booklet describes the Rhonite Resins as being developed to impart handle to fabrics ranging from stiffness through full resiliency to silky suppleness, depending on the demand of the season. Full information and uses given.—ROHM & HAAS COMPANY, Washington Square, Philadelphia, Pa.

708. CAUSTIC SODA BOOKLET — Deals with manufacture, its properties, methods of handling and storage, technical data, etc.—ALKALI SALES DEPT., THE DOW CHEMICAL CO., Midland, Mich.

711. PIXOL — Recommended as a leveling and penetrating agent especially for the dyeing of wool, described as being useful as a finish for worsted piece goods. Prevents bronziness in sulphur dyeing on cotton.—AMERICAN ANILINE PRODUCTS, INC., 50 Union Square, New York, N. Y.

713. LIOVATINE ED — Vat dyeing assistant increasing penetration and level dyeing with maximum yield of color.—SANDOZ CHEMICAL WORKS, 61 Van Dam St., New York City.

714. NEW SODA ASH BULLETIN—64-page edition contains both new material and revisions of previously used data covering the subject. Ask for Bulletin No. 5—SOLVAY SALES DIVISION, 40 Rector St., New York 6, N. Y.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletin on Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and yarn, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

716. WIDE RANGE SCOURING AND WETTING AGENT—4-page folder describing Houghton's concentrated non-ionic, synthetic detergent and wetting agent. Cerfak 1380, usable over entire pH range for efficient scouring and wetting.—E. F. HOUGHTON & CO., Philadelphia 33, Pa.

725. VAT DYEING OF WOOL—Write for Calco Technical Bulletin No. 797 outlining fundamental dyeing procedure, and explaining new advances in the technology of wool dyeing and finishing.—CALCO CHEMICAL DIVISION, AMERICAN CYANAMID CO., Bound Brook, N. J.

728. UNIQUE YARN DYEING SERVICE —

Handy Return Card ▶

List Booklets You Want Tear Out and Mail the Attached Card Now!

Please be sure to fill in your Firm's Name and your position on the Coupon. This service cannot be extended to you unless this information is furnished.

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BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 14.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 5, GA.

Booklet by Franklin Process tells why Franklin Process Yarn Dyeing Service is one of the top package yarn dyeing services. Also includes table showing relative fastness of dyestuffs used on various fibers.

729. **STATIC AND STATIC CONTROLS**—Papers deal with historical background of static electricity and the problems caused by it along with methods of controlling them. — Write DEXTER CHEMICAL CORP., 810 Edgewater Road, New York 59, N. Y.

745. **RAPIDASE FOR DESIZING** — Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

749. **WATER SOLUBLE GUMS** — Booklet giving the origin, gathering, marketing and uses of water soluble gums. This booklet No. 23 is beautifully illustrated, and is one of the few treatises on the subject. —JACQUES WOLF & CO., Passaic, N. J.

753. **TRITON X-100**—Booklet available describing this highly concentrated detergent and wetting agent, main uses fully discussed and chemical properties brought out.—ROHM & HAAS COMPANY, Philadelphia 5, Pa.

762. **ONYX TECHNICAL DATA SHEETS** — Two new data sheets describing the use, advantages, and applications of Xyne Resins S 69 and Xyne Resin 242.—ONYX OIL & CHEMICAL COMPANY, Jersey City 3, N. J.

765. **HOSIERY FINISHES AND FORMULAS**—Attractive new booklet describing the Amalgamated line of hosiery finishes and gives numerous finishing formulas.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

766. **DU PONT PEROXIDE BLEACHING SYSTEMS**—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included. — E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

769. **SURFACE TENSION DEPRESSANT** — The Booklet, "Mercerizing and Alkamerco—The Ideal Dry" which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., 1440 Broadway, New York, N. Y.

774. **ROYCE TEXTILE CHEMICALS**—This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

KNITTING . . .

801. **THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE** — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

805. **REINER CREELS**—Catalog describing these Single type, magazine, and truck creels for all requirements in the knitting and weaving industry.—ROBERT REINER INC., Weehawken, N. J.

816. **FORGED HEAD ALUMINUM BEAMS**—Bulletin 49-A shows new beam capable of holding high yardage of nylon and rubber warps, with specifications. Also describes permanent mold aluminum tricot and section beams — MILTON MACHINE WORKS, INC., Milton, Pa.

822. **HIGH SPEED JERSEY CIRCULAR MACHINE**—Booklet describing supreme's line of high production, body-size and large diameter jersey machine, Model MJ, for underwear and outerwear.—SUPREME KNITTING MACHINE CO., 105 Johnson Ave., Brooklyn 6, N. Y.

826. **THE KIDDE KNITTER**—Bulletin describing this newest in Raschel-type warp knitting machines and higher production attained with it.—KIDDE MANUFACTURING CO., INC., Forrand St., Bloomfield, N. J.

831. **CIRCULAR KNITTING MACHINES** — Brochure pictures and describes the products which can be made on the Brinton small diameter circular knitting machine. Examples of the variety of products which can be made are pictured and the machines described. — H. BRINTON COMPANY, Kensington Ave. and "M" St., Philadelphia, Pa.

SEWING MACHINES . . .

916. **THE SUPERLOCK**—Bulletin 823 describing and illustrating the W & G Superlock overseaming machine.—WILLCOX & GIBBS SEWING MACHINE CO., 214 W. 39th St., New York 18, N. Y.

924. **BUTT-TACKING SEWING MACHINE** — Booklet describes an operating installation of the Merrow single thread butt-tacking sewing machine. Gives performance data, and advantages of butt-tacking. — Write: THE MERROW MACHINE COMPANY, 25 Laurel Street, Hartford, Connecticut.

MATERIALS HANDLING . . .

1001. **CASTERS AND WHEELS**—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach 4, Calif.

1004. **PITTSBURGH COLLAPSIBLE CARGO-TAINERS**—Stacked they lock in place and permit visible inventory; collapsed they nest in small area. Base permits entry by all types of lift trucks. Write for brochure MH-15.—PITTSBURGH STEEL PRODUCTS COMPANY, Pittsburgh 30, Pa.

1005. **LANE CANVAS BASKETS**—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1107. **OVERHEAD HANDLING EQUIPMENT** — 50 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem.—THE AMERICAN MONORAIL CO., 13100 Athens Ave., Cleveland 7, Ohio.

1008. **CASTERS AND WHEELS**—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1010. **CONVEYOR KEY BOOK**—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN CO., 1115 Franklin St., Louisville, Ky.

1011. **TEXTILE TRUCKS** — Booklet describing doff boxes, frames and trucks, yarn, waste, platforms, conditioning steep lap fiber utility trucks etc. Uses and description.—EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

1012. **"SERVES YOU RIGHT"** — Is theme of succint review of fork-lift trucks, powered hand trucks and industrial towing tractors, with emphasis on proper planned materials handling systems which can be obtained from CLARK EQUIPMENT CO., Industrial Truck Div., Battle Creek, Mich.

1013. **"A STORY OF TRACTOR TOOLS AND THEIR USE"**—Comprehensive illustrated guide effectively present in cartoon-style the many principal uses for this type of Equipment. — HYSTER CO., 2903 N.E., Clackamas St., Portland 8, Ore.

1025. **ELECTRIC HOISTS AND CRANES**—Booklets describing a complete line of Electric Overhead, Cab and Floor-Operated Traveling Cranes, and a similar complete line of Electric Hoists. All fully discussed with pictures and engineering diagrams.—SHEPARD NILES CRANE & HOIST CORP., Montour Falls, N. Y.

1027. **SINGLE-BEAM CRANES**—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling crane. SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1029. **ELECTRICAL INSULATING MATERIALS**—Bulletin G.F.-50 describes 5 high-strength plastics: Diamond Vulcanized fiber; Vulcoid, A C-D dielectric material, Dielecto, a laminated thermosetting plastic; Celorex, a fabric-base molded plastic; and Micabond, mica in most usable form. Full information on each in forms available.—CONTINENTAL-DIAMOND FIBRE COMPANY, Newark, Dela.

1031. **MOTOR-DRIVEN TROLLEY HOISTS**—12-page illustrated booklet describing Robbins & Myers motor-driven trolley hoists. Capacities from 1000 to 20,000 pounds. Bulletin 805-A.—ROBBINS & MYERS INC., Hoist & Chain Div., Springfield, Ohio.

MISCELLANEOUS . . .

1101. **AUTOMATIC BOBBIN REFINISHER** — A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule, J. M. NASH COMPANY, 2360 N. 30th St., Milwaukee, Wis.

1102. **BALING PRESSES** — An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. **UNBRAKO SCREWS** — Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1107. **AUTOMATIC QUILL POLISHER**—Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2360 N. 30th Street, Milwaukee 10, Wis.

1108. **FABRICATION OF U. S. STAINLESS STEELS**—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosive-resistance tables for chemicals.—CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1110. **CUTTING MACHINES**—A collection of specification sheets and general descriptive matter covering cutters for thread waste, Staple, fiber, etc., complete description and uses.—TAYLOR-STILES & CO., 21 BRIDGE ST., Riegelsville, N. J.

1111. **BRUSHES**—A 28-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1112. **THE RANDOM WEB PROCESS**—Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cut-away diagrams.—CURLATOR CORPORATION, Textile Division, 565 Blossom Rd., Rochester, N. Y.

1115. **TEXTILE WRAPPING MACHINES** — Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfeed, most protective package made. — HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1122. **BALING PRESSES** — Bulletins available describing this company's line of motor-driven and hydraulic baling presses for finished goods, textile fibers, wool, and waste of all kinds.—LOEHMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wisc.

1123. **CHROMIUM PLATING** — New booklet tells how Walhard engineered hard chromium plating service works for industry. Walhard's capacity to produce controlled quality, and economical operation are discussed along with pictures of the operations.—WALTON AND LONSBURY, Attleboro, Mass. n'nF'..—M2

SEPTEMBER, 1953

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....

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Please send more information on advertisements (give Page numbers)

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Name ..... Position .....

Company Name .....

Address .....

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◀ Handy Return Card

USE THIS OPPORTUNITY TO INFORM YOURSELF OF CURRENTLY AVAILABLE LITERATURE DEALING WITH MACHINERY, EQUIPMENT AND SUPPLIES FOR TEXTILE MILLS, FILL OUT THE ATTACHED CARD TODAY.

Twister Spindle

(Continued from page 121)

brake contact surface and with increased leverage gives light touch stopping.

(6) Blade is chrome-plated to increase service life.

Hartford Machine Screw Co., Inc., Hartford 2, Conn.

For additional data, request item I-204, using Handy Return Card on page 212.

NEW Equipment AND MATERIALS

Other items are described on pages 119 and 121

56 Gauge Raschel Knitter with up to Five Guide Bars

A Raschel knitting machine of 56 gauge with up to five guide bars features open type cams and is especially suitable for netting and power net.

The speed on two-bar fabric is in the neighborhood of 400 and 425 stitches per minute, and on four-bar power fabric, 350 to 400 stitches per minute. Considering the fine gauge, the unit reaches the speed of a three-bar tricot machine of the same gauge. However, the Raschel knitter has not only the same speed but also the advantage of up to five guide bar fabrics.

It also can be used for knitting elastic fabrics at high speeds. The machine is equipped to take 14" as well as 21" flange diameter beams.

Robert Reiner, Inc., Weehawken, N. J.

For additional data, request item I-401, using Handy Return Card on page 212.

Low-Temperature Curing Resin for Synthetics

A curing resin for synthetic blends and fabrics, designated "Finish EN," is a water-soluble urea formaldehyde resin that produces good crease resistance, dimensional stability, good abrasion resistance, and a desirable hand at curing temperatures as low as 240 to 260 F.

The low-temperature curing made possible with the product prevents the yellowing or roughening that often occurs at higher temperatures when working with Orlon, Dacron, dynel, Vicara, Acrilan and other new synthetic fibers separately or blended with viscose rayon.

Another advantage is its homogeneous consistency which contributes to improved resin retention by the fabric.

Extensive work has demonstrated that a combination of Finish EN and Cuprofix is most suitable for obtaining dimensional stability and color fastness at low cost on synthetic fibers.

Sandoz Chemical Works, Inc., 61 Van Dam Street, New York, N. Y.

For additional data, request item I-211, using Handy Return Card on page 212.

Improved Simpson Cut-Off Winder Saves Material, Time, and Labor

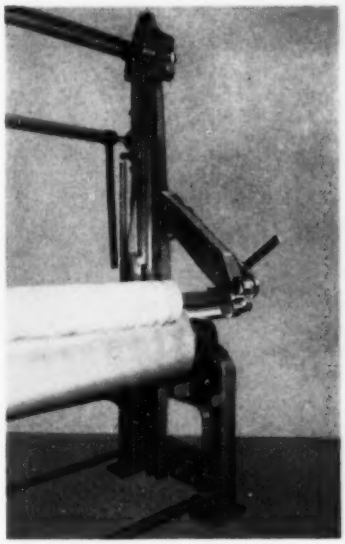
An improved Simpson Cut-Off Winder, for fast, economical winding of piece goods in widths to 60", is now being offered. Mill owners report that this pneumatic winder saves the cost of refinishing up to 50 yards of cloth formerly spoiled in completing one roll and beginning another.

Roller bearing arms hold the nearly-completed roll and release it automatically on completion of the winding operation. Splicers start each roll cleanly and smoothly without the necessity of wetting the cloth.

The roller bearing arms receive the partially filled roll when it is transferred from the back drum to the front drum by means of the transfer arms. When the roll has been completed and the cut made, a lever is pulled at the side of the arm and the roll drops out. No lifting of the arm is needed to release the completed roll, and the roller arm and release lever return automatically to their locked positions.

The roller bearing arms prevent the steel center bar from coming in contact with the rough iron casting of the arms. Instead, the ends of the center bar operate on the roller bearings. Wear and scarring are thus avoided.

The cut-off winder operates at speeds up to 200 yards per minute and is fully automatic. In addition to its savings in material and time, it eliminates the heavy lifting formerly required. Optional streamlined cover protects the machine and its operator, and is easily removed for adjustment, cleaning or repairs.



H. W. Butterworth & Sons Co., Bethayres, Pa.

For additional data, request item I-206, using Handy Return Card on page 212.

Multi-Purpose Finish for Corduroys

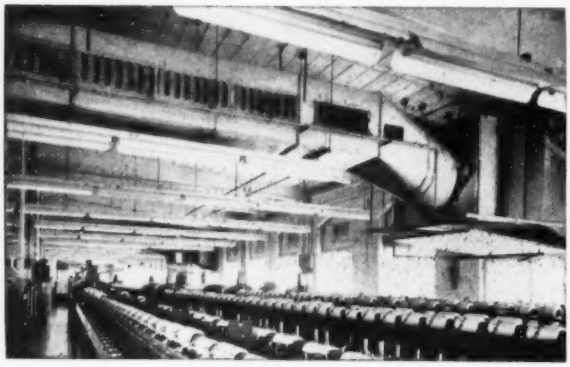
A recently developed finish for corduroy, called Life Guard, provides crease resistance, longer wear, color retention, shrinkage control, and durable water repellency.

Men's jackets in pinwale corduroys finished with Life Guard were tested

Parks-Cramer

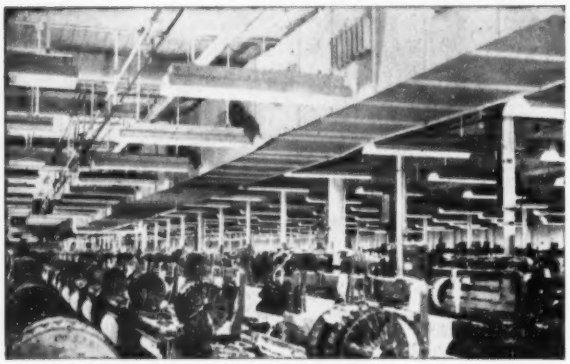
CERTIFIED CLIMATE

YOU know the value of closely controlled atmospheric conditions in the textile mill. OUR object is to design the best possible air conditioning apparatus and to recommend the system most suited to your requirements.



Automatic Airchanger—unit or central type.

Gradumatic Humidification.



Air Washer System—central station or ceiling type—straight or in combination with direct humidification or refrigeration.

Each system flexible and of dependable capacity.

All with Gradual Acting Psychrostat Regulation.

Engineering, manufacturing, installing by Parks-Cramer.
Complete new installations. Modernizing of existing systems.
Centralized responsibility.
Textile mill humidification and air conditioning since 1906.

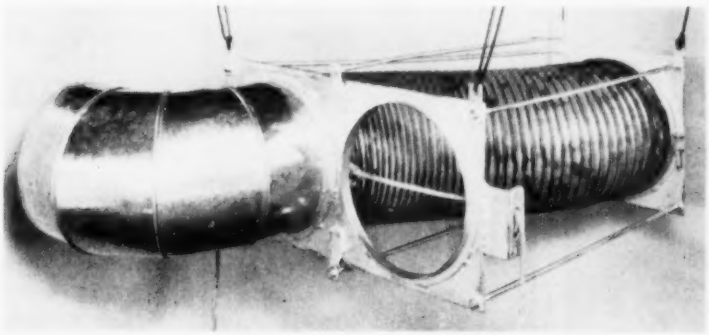
Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C.

over eight months and in these garments where no dry cleaning or washing was done, it was found: the fabric was soil-resistant as well as spot-resistant (to all but oily stains); showed no abrasion at elbow; showed no soil or darkening of color; was free of wrinkles; had a softer hand.

Crompton-Richmond Co., Inc., 1071 Avenue of the Americas, New York 18, N. Y.

For additional data, request item I-402, using Handy Return Card on page 212.



The Benoit raw stock switch for woolen and worsted mills.

Raw Stock Switch Prevents Accidental Mixing

Accidental mixing of stock fed to any one card in a woolen or worsted mill can be prevented by use of the Raw Stock Switch. It consists of a metal frame within which a length of flexible tubing is contained.

This metal frame is suspended from the ceiling at a level where the openings of the flexible tubing will connect with the main supply lines. Two or more openings are supplied in the metal frame at the outlet end of the flexible tubing. When one hopper or bin has been filled for an individual card, the flexible tubing is moved to another opening, by means of a rope and pulley arrangement, to feed into another hopper or bin for another card.

The device can also be supplied with switch electrically operated instead of manually controlled.

A distinct advantage of the switch is that whenever the elbow of the feed line becomes clogged with raw stock, stopping the flow of material, it can be cleaned out quickly and easily by merely shifting the flexible tubing to another opening, thus leaving the clogged elbow clear and easily accessible for cleaning.

Benoit Mfg. Co., P. O. Box 112, Charlton City, Mass.

For additional data, request item I-403, using Handy Return Card on page 212.

Packaged Process Controls

Introduction of a series of individually engineered control systems as "packaged" units to provide automatic control of various industrial process operations was reported recently.

The packaged units will be developed to take advantage of the uniformity among many process operations. Each unit, to be specially engineered for the specific process operation, will include recording and controlling instruments, measuring and control elements and related accessories. Complete instructions will be provided to facilitate their installation without benefit of specialized skills.

The packaged systems will enable a processer to select an instrumentation system on the basis of over-all function, eliminating necessity for lengthy consideration ordinarily given to the characteristics of the individual control elements and their effect on the over-all operation. They will only be developed for those industrial process operations where there is little or no need for variation in the control system elements. Ultimately the matched control units will cover all industries, ranging from ceramics and chemicals to textiles and utilities.

Minneapolis-Honeywell Regulator Co., Industrial Div., 4492 Wayne Ave., Philadelphia 44, Pa.

For additional data, request item I-221, using Handy Return Card on page 212.

NEW Equipment AND MATERIALS

Automatic Bobbin Stripper

Now bobbins can be stripped automatically on Crompton & Knowles W2 and W3 looms with the Clark bobbin stripper. No attention is required from the weaver. No oiling or maintenance is required. Bobbins are said to have a longer life since cutting or splitting of them is avoided.

A full bobbin knock-off switch prevents stripping of full bobbins. Dragins are reduced to a minimum due to the efficient stripping of tails at the time of bobbin transfer.

W. S. Taylor, Inc., 52 Vanderbilt Ave., New York, N. Y.

For additional data, request item I-404, using Handy Return Card on page 212.

Larger Belt Hook Can Be Used to Lace Belts 13/32" Thick

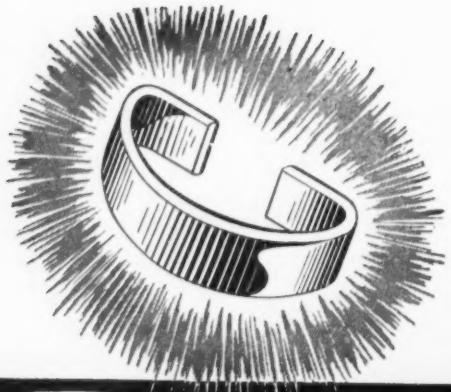
With the new "Clipper" No. 7 belt hooks, belts a full 13/32" thick can be laced. Also, they are applicable where No. 6 hooks pull out of ⅜" thick belts used on extra heavy drives.

The No. 7 hooks provide a laced joint just as smooth and as flexible as the smaller "Clipper" belt hook sizes with no injury to the belt fibers. Tests show that each No. 7 hook in a ⅜" leather belt will stand a pull of 125 lb—675 lb per inch or 5400 lb in an 8" belt.

The larger hooks can be applied with the No. 6 or No. 8 Clipper Speed Lacers. The No. 9 portable lacer can be modified to accommodate these hooks also.

Clipper Belt Lacer Co., Grand Rapids 2, Mich.

For additional data, request item I-212, using Handy Return Card on page 212.

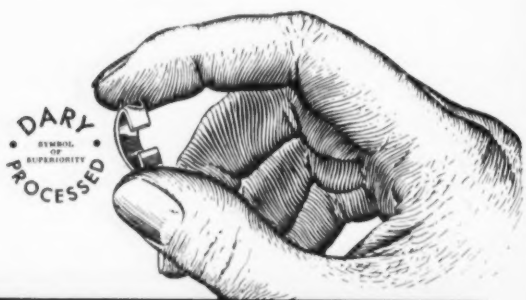


DARY
Ring Travelers

A WELCOME RING

Dary Ring Travelers . . . these words have a welcome ring to millmen throughout the textile industry. For many, many years Dary has meant dependable spinning and twisting performance, however difficult the assignment.

The next time your Dary representative calls, welcome him, for he carries a wealth of experience and offers the finest quality travelers available anywhere.



THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS

LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD "JACK" RHYMER, BOX 2261, GREENVILLE, S. C.

98 YEARS
OF EXPERIENCE IN BUILDING TANKS

KETTLES
DYE-VATS
KIERS
JIB-BOXES

● Cole builds vessels to your specifications — dye-vats, kiers, starch-kettles, acid tanks, jib boxes, or other processing vessels for the finishing and dyeing industry . . . in stainless steel, nickel-clad steel, or of standard steel lined with monel metal.

And, for almost a century Cole elevated tanks have provided a dependable water supply for mills and communities.

Our long experience in the design and fabrication of tanks and vessels for the textile industry may be of help to you.

●

Write for latest Cole catalog—"Tank Talk."

Established 1854

R. D. COLE MFG. CO.
NEWNAN, GEORGIA
ELEVATED TANKS • VESSELS • CYLINDERS
TOWERS • BINS • STANDPIPES

NEW Equipment AND MATERIALS

Radio Remote Control for Industrial Trucks

Radio remote control for electric industrial trucks and tractors saves a substantial amount of time in the movement of materials and goods.

The operator, by means of a small control box attached to his belt, moves the truck or trailer train forward, or around turns, and stops it without going near the truck or tractor. Pallet loads and skid loads may be picked up by the truck while the operator is some distance from it.

In order filling, for example, the "Radox" equipment eliminates the time wasted in walking to the truck, driving on to the next location, then retracing steps back to the stock for the next loading. Orders are filled more speedily. With much walking eliminated, worker fatigue is greatly reduced.

When desired the truck or tractor can be operated in the conventional manner by means of the push button controls conveniently located in the handle.

Barrett-Cravens Co., 4609 S. Western Blvd., Chicago, Ill.

For additional data, request item I-219, using Handy Return Card on page 212.

Loading Dock Shelters and Canvas "Wall" Curtains

Loading Dock Shelters that are precision - constructed, mass - produced, yet individually engineered to fit specific requirements, are now available. Extending outward on a collapsible steel framework to shelter truck or freight car loading doors of any size, they collapse flush against the building when not in use. Each of several standard models can also be adapted to fit any unusual condition of use. Advantages: They protect men and materials against all extremes of weather; they increase labor efficiency in loading and unloading trucks and freight cars; they keep dock-boards dry—speeding the loading operation and promoting safety; they boost the percentage of containers and merchandise arriving or leaving in tip-top condition.

Canvas "wall" curtains for use indoors as effective windbreakers, to stop cold drafts and heat loss are also produced by this manufacturer. Heavy, sturdy, and durable, these canvas "walls" have all the flexibility of curtains. They can be rolled up, shirred up or drawn aside quickly and easily to permit free flow of traffic and to permit complete ventilation in hot weather.

Atlas Products Co., 1300 W. Washington Blvd., Chicago 7, Ill.

For additional data, request item I-405, using Handy Return Card on page 212.

"Quick-Clean" Motor Line Extended to 75 hp

The Allis-Chalmers line of "Quick-Clean" textile motors (Type APQ), designed for individual drive on pickers, spinning and twisting frames, etc., has been extended up to 75 horsepower.

The new motors offer the same construction features of free air flow, pre-lubricated bearings, rigid cast iron frame, and double insulation found in the company's 2, 3, 5, 7½, 10, 15-hp "Quick-Clean" units. The

LUG SUPPORTS

THE FINEST EVER MADE

Cast from the best known "ALUMINUM ALLOY"—Copper-Silicon and Magnesium to give the highest possible strength and wear — yet very light in weight — to save horse power.

- Most inexpensive support made — considering the following:
- Resistant to Wear.
- Easy to Install.
- Increases Life of Picker Stick and LUG STRAP.
- Requires less attention of Loom Fixer after being installed.
- Can be adjusted up or down on picker stick—to give more or less power very easily.
- Greatly reduces "Machine-Down" time.
- Simple Construction — no parts to get out of order.
- Used by all Mills—interested in Quality and Economy.

WEST SIDE
FOUNDRY COMPANY
2 SOUTH HANKS ST.
ROME, GA.

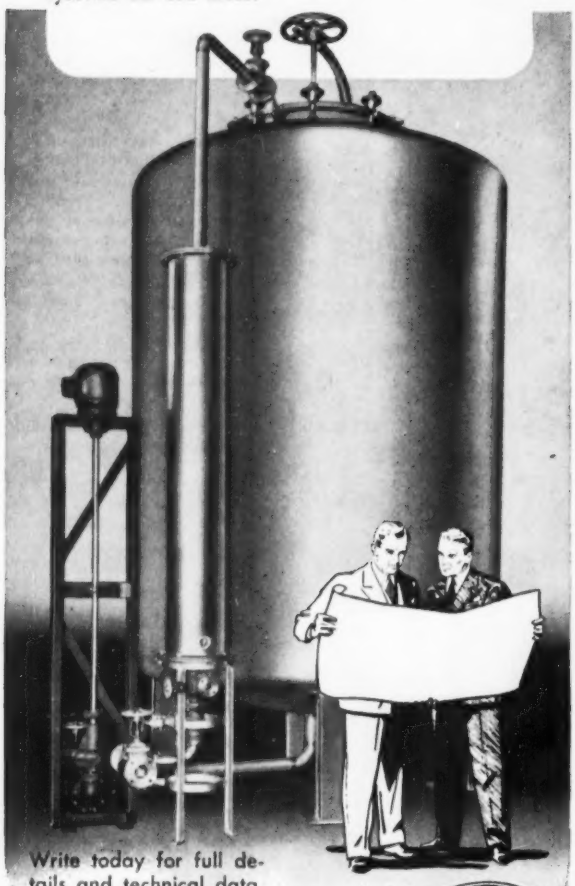
ALLEN KIERS

Engineered...

TO YOUR SPECIFICATIONS

Famous Allen Worcester complete stainless pump and heater kiers are the answer to your short run and heavy goods problems where quality control is important. Full liquor strength maintained . . . no live steam admitted . . . positive circulation. For raw stock, knit goods, heavy goods for vat dyeing, thread and yarn, toweling, curtain goods, varying lots, *you must have kiers — Allen Kiers.*

Allen Worcester also installs modern circulation systems on old kiers.



Write today for full details and technical data.

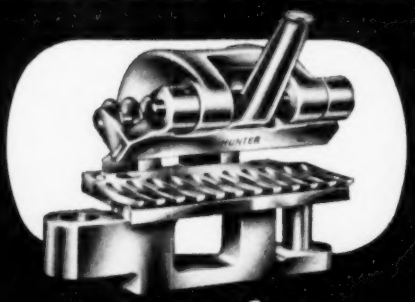
WILLIAM ALLEN SON'S COMPANY
WORCESTER 1, MASS.

ALLEN WORCESTER

Makers of the famous ALLEN KIERS

NOW

THIS UNIVERSAL TENTER CLIP



serves for regular feed or overfeed without pins

Get the facts about the advanced new Universal Tenter Clip* — developed by James Hunter Machine Company, made and sold in United States and Canada exclusively by Marshall and Williams.

ADVANTAGES: Operates on any standard tenter frame as a regular clip or will accommodate overfeeding if frame is equipped with Hunter overfeed device. Can be instantly changed from regular feed to overfeed without shut-down of tenter frame. No changing of chain required—no alteration of machine necessary. Comb-like plate on clip gives uniform and complete drying of selvage.

The cost of this clip and overfeed equipment is very reasonable. Doing away with multiple tentering units reduces floor space requirement by one-half—with all resultant savings. Operating speeds are the same as with conventional clips. Uniform and accurate overfeeding up to 20% easily obtainable.

Other M & W Products

High Speed Tenter Frame & Complete Line of Tenter Clips

Tenterettes — short tenters (30", 80" and 100" long) built to any maximum width, with straight or hinged rails

Swing Plaiters — anti-friction bearings throughout, designed for easy cloth alignment

Let-Off Stands — movable, with casters, or fixed base, swiveling for easy cloth alignment

Batchers — constant tension or tensionless

Send for complete data today — without obligation

*Dungler System

M & W

MARSHALL and WILLIAMS CORPORATION
PROVIDENCE, R. I. • GREENVILLE, S. C. • NEW YORK, N. Y.

low starting current, normal starting torque machines are available in 60 cycle, 220, 440, 550 volts, 40 C rise, continuous duty ratings.

Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.

For additional data, request item I-201, using Handy Return Card on page 212.

Automatic Valve Actuator Mounts Directly on Valve in Service

Designed as package units for installation directly on the valve in service, on valves at manufacturer's plant, or at distributor's warehouse, is the new line of Ledeen Valve Actuators for the automatic operation of gate, plug, diaphragm, butterfly, and other flow control valves. They are mounted directly on the valve without need of outside support. Operated by air, gas, oil, water or steam, the actuators feature power operation and direct or remote control.

Ledeen Manufacturing Co., 1600 So. San Pedro St., Los Angeles 15, Calif.

For additional data, request item I-213, using Handy Return Card on page 212.

Worn or Broken Brass Rolls Changed in a Few Minutes

By using "Renu-Shaft" rolls it is no longer necessary to discard a good brass roll because of the difficulty of replacing worn or broken shafts.

These rolls have a press-fitted shaft in the roll head. At the base of the shaft is a well which is connected to the face of the head by a right-angle channel sealed with a Zerk grease-fitting. With the fitting open, and the shaft hole filled with grease, the shaft is driven in to within ½" of full depth. The Zerk fitting is then closed.

If it becomes necessary to replace the shaft, a hand grease gun or similar equipment of 10,000 psi capacity is applied to the fitting. Pressure of several tons on back end of the shaft is created, causing steady removal of shaft from roll body.

The Renu-Shaft permits the user to reduce to a few minutes a job which formerly took several hours.

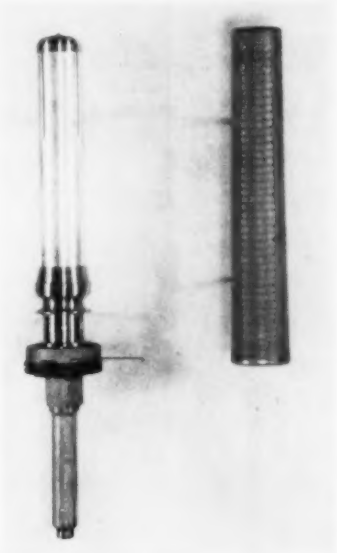
Rodney Hunt Machine Co., Orange, Mass.

For additional data, request item I-214, using Handy Return Card on page 212.

Ball Bearing Spindle for Wool Spinning on Paper Tubes

A ball bearing spindle for wool spinning frames is designed to utilize paper tubes and equipped with a special foot step dampening device that requires lubrication every two years. Bobbins are positively driven by centrifugal force and are evenly seated throughout the length of the frame.

The spindle has a finger-operated brake which stays on until released, making piecing-up easier for the operator. No important changes are necessary on present spooling, dressing, and winding equipment to accommodate the new bobbin.



A package with an overall length of 13" and traverse of 12" can be made on the spindle. Yarn content of bobbins ranges from 19 oz to 26 oz — approximately 50% more than is usually wound on standard wooden bobbins. Fewer knots, longer intervals between doffs, increase in frame efficiency, and greater spindle assignment are other advantages to be derived from its use.

Davis & Furber Machine Co., North Andover, Mass.

For additional data, request item I-406, using Handy Return Card on page 212.

The EMBLEM OF QUALITY METAL SHIELDS

For Spools and Bobbins

Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields regardless of when you buy spools and bobbins.

TEXTILE SHIELD CO., INC.

J. N. ANDERSON, Treasurer

LAWRENCE, MASS., U. S. A.

DARNELL CASTERS & E-Z ROLL WHEELS

Always **SWIVEL** and **ROLL**

FOR ECONOMICAL BUDGETS

...OVER 4000 TYPES of CASTERS & WHEELS

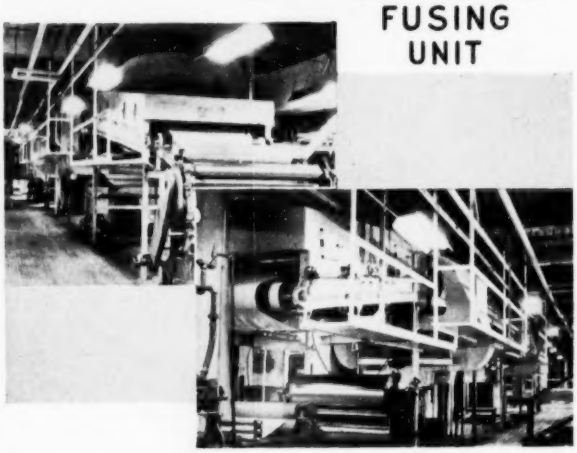
There is a type of Darnell Caster or Wheel for every kind of use and floor. Made for light, medium and heavy-duty service, you are sure to find in the Darnell line the exact caster or wheel to meet your individual requirements.

Write for Free Darnell Manual

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

PROCESSING COATED FABRICS

ROSS *Combination* DRYING and FUSING UNIT



for organosol and plastisol coatings on cloth

Operating in the plant of RESPRO, INC., makers of the famous "Resproid" plastic sheeting and other materials, this arched unit is used 50% for drying and 50% for fusing with organosols; 25% for drying and 75% for fusing with plastisols. Advanced ROSS designing makes it a multi-purpose unit for maximum drying efficiency and operating economy.

For all processing operations involving coating, fusing, dipping, impregnating, printing, drying and curing of yarn, cloth, sheeting or film, you can rely upon ROSS' 32 years of experience to provide better-than-average equipment and service. Write for Bulletin No. 30.

J. O. ROSS ENGINEERING CORPORATION

Designers and Builders of Air Processing Systems

ROSS SYSTEMS

NEW YORK 22—444 Madison Avenue
ATLANTA—3182 Peachtree Road, N.E.
BOSTON 9—79 Milk Street
CHICAGO 6—201 N. Wells Street
DETROIT 4—9225 Grand River Avenue
LOS ANGELES 17—600 St. Paul Avenue
SEATTLE 1—823 Skinner Bldg.

ROSS ENGINEERING OF CANADA, LTD.—MONTREAL, VANCOUVER
CARRIER ROSS ENGINEERING COMPANY, LTD., LONDON, ENGLAND

Durable Finish for Tenter Pin Plates Prevents Corrosion

Of interest to supervisors in dyeing, bleaching, and finishing plants utilizing pin tenters is a service now available which involves plating the pin plates to prevent corrosion.

The durable finish also is resistant to acids with which these plates come in contact.

Southern Textile Works, 202 S. Towers St., Anderson, S. C.

For additional data, request item I-205, using Handy Return Card on page 212.

"Flip-Close" Polyethylene Bag Offers Advantages in Packing, Shipping, Retailing and Re-Use

The Bemis printed polyethylene bag with the patented Flip-Close top closure permits both distinctive brand printing and full visibility of contents, plus accessibility of the product for touching.

The Flip-Close feature consists of a short flap, extending above the top of the bag mouth but folded back against the bag body, welded on both sides with a fine line weld into the side seam of the bag. In open position the flap does not interfere in any way with the mouth opening, but when flipped across the opening it forms a "cap" closure. The bag can be opened and re-closed any number of times without damage to the bag or the closing flap.

The bag is economical, requires little storage space, is quickly and easily packed, and saves shipping space and weight. Closing equipment is not required. A loading chute or tray is helpful, but not necessary, in inserting the item being packaged into the bag. Because no complicated installation is required for filling and closing, the bag is readily adaptable to operations of any size.

The polyethylene, containing no plasticizers, does not deteriorate with age.

After the sale has been made, the Flip-Close polyethylene bag is still far from the end of its usefulness. Housewives find the bags handy for countless uses in the home — as refrigerator bags, for keeping leftover pastries fresh, or for seasonal storage of clothing. They make fine shoe bags for travelers, or can be used on picnics for carrying food or ice cubes, and for bringing home wet bathing suits.

Throughout these various re-uses, the manufacturer's brand continues to make its impression on the housewife, keeping her constantly reminded of the trade name of the original contents.

Bemis Bro. Bag Co., 408 Pine Street, Saint Louis 2, Mo.

For additional data, request item I-407, using Handy Return Card on page 212.

Ribbon-Like Acetate Staple for Decorative Influence in Blends for Suitings

A ribbon-like acetate staple fiber of 35 denier per filament for blending in yarns going into heavy fabrics such as suitings and home furnishings is now being produced.

This new product, heretofore not made in the United States, gives effects which are attracting favorable attention in European designed fabrics. The fiber will be marketed in various lengths as well as in tow form.

Used primarily as a decorative influence, the new fiber imparts a fleck effect and sparkle to fabrics. When cross-dyed, it adds eye-appeal; and when piece-dyed, it gives textural appeal.

Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.

For additional data, request item I-408, using Handy Return Card on page 212.

NEW Equipment AND MATERIALS

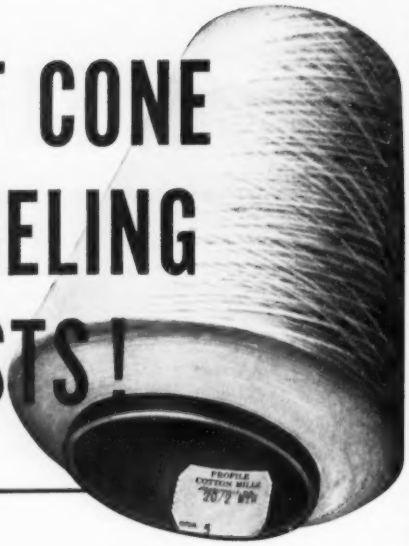
15-Yard Automatic Shuttle Embroidery Machine

An American-made 15-yard automatic shuttle embroidery machine now being produced has these features:

Full 24" span, complete with automatic attachment suitable for standard Vomag type punching cards; 4/4 repeat; stitching width 72/4; automatic spanning; large package of goods roller; liberally provided with ball bearings; shafts provided with Oilite bushings; cams are hardened; steel bands are guarded; extra heavy

ONCE USED, ALWAYS SPECIFIED!
EVER-DEPENDABLE
TATEM
SELECTED HICKORY
PICKER STICKS
Yes—Tatem picker sticks cost a little more but last much longer. That's because they are made of only finest quality hickory — perfectly cut, seasoned and finished. Low maintenance cost on looms carrying these picker sticks testifies to the knowledge and modern manufacturing skills developed by Tatem over 84 years.
FOR THAT STRONG, SMOOTH STROKE AT THE HEART OF YOUR LOOM YOU'LL STAY SOLD ON TATEM.
PICKER STICKS • PARALLEL PLUGS • SWEEPSTICKS • CONNECTORS and OTHER LOOM PARTS
TATEM
MANUFACTURING COMPANY
EASTFORD, CONNECTICUT
SOUTHERN REP.— GREENVILLE BELTING CO., GREENVILLE, SOUTH CAROLINA
NORTHERN REP.— TATEM SALES COMPANY, EASTFORD, CONNECTICUT

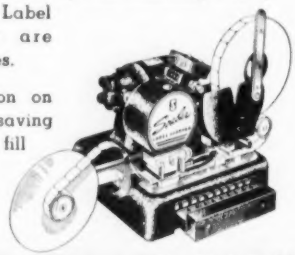
CUT CONE LABELING COSTS!



Print Your Own Labels the SOABAR Way!

Cone labeling is *fast, inexpensive* when you print Soabar gummed labels . . . right in your own plant . . . on the Model 20 Self-Stop Label Marker. You eliminate costly inventories of pre-printed labels . . . stop wastage . . . by printing only as many labels as you want . . . when you want them . . . with the *exact* information needed.

The easy-to-operate Model 20 Marker prints and counts 170 labels per minute with lot number, yarn count, color, operator's number . . . all the information you want, in one high-speed operation! Printed labels are automatically rewound in rolls, and attaching is easy with Soabar's "Jiffy Label Moistener". Labels are available in three sizes.



For further information on this cost-cutting, time-saving labeling method, just fill in and mail the coupon.

SOABAR COMPANY

Ticket & Label Marking Equipment & Supplies
Since 1912

5818 Erdrick Street Philadelphia 24, Pa.
Offices in 11 Principal Cities.

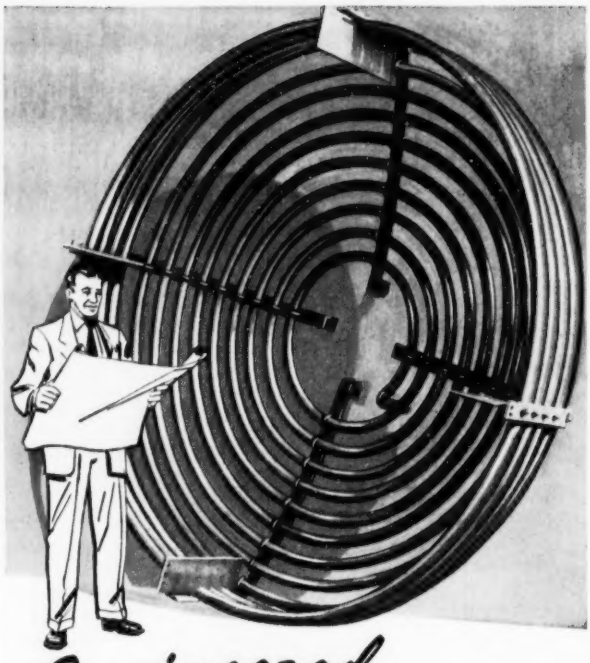
Yes, I would like more information on cone labeling with Soabar gummed labels and the Model 20 Marker.

Name_____

Company_____

Address_____

_____



Engineered TO YOUR SPECIFICATIONS

Length 261 ft. of 2 inch stainless steel tubing.
Diameter 9 ft. 3 ins. Vertical height 3 ft.
Weight with fittings and flanges 1000 lbs.
Heat transfer area approximately 162 sq. ft.

Yes—it was built to specifications, built to do a job. It will continue to do that job day after day for many years without down-time or costly maintenance because it is made from the wonder metal, stainless steel and because it was *engineered and built by SIMS.*

Everyday SIMS build pipe coils into shapes to fit individual installations. Coils made to your specifications and fabricated from *any* commercial metal, such as brass, copper, nickel, monel, inconel, stainless or carbon steel. SIMS Engineers can recommend the right shape, size or material to fit *your* particular job.

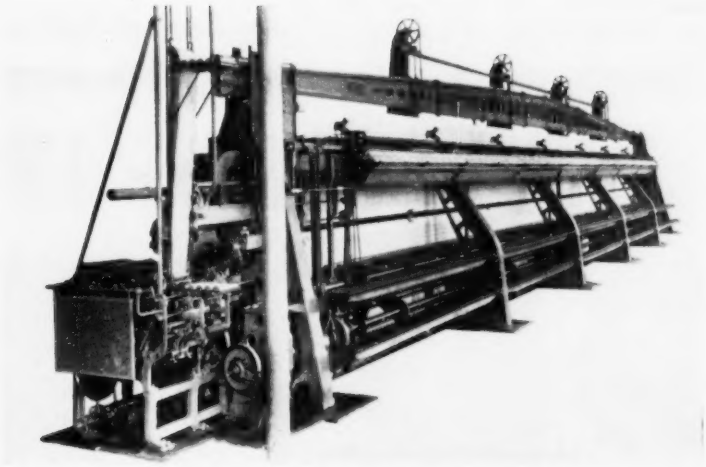
Kettles & Vats
Size Boxes
Rolls & Rollers
Dry Cans
Linings
Slasher Cylinders
Vapor Absorption
Air Systems
Dust & Lint Control
Materials Handling
Drying Systems
Machinery Development

"Custom TAILORS" to INDUSTRY!

SIMS "know-how" and craftmanship is your guarantee of quality products. Close attention is given to the smallest details in material and workmanship to insure that *equipment by SIMS* meets your exacting requirements.

Call, wire or write SIMS today!

Sims METAL WORKS
WEST POINT, GEORGIA



Reiner 15-yard automatic shuttle embroidery machine.

shuttle shaft; separate upper and lower shuttle drives, permitting unobstructed access to cloth; front and rear shipper rods over entire length of machine; frame centrally actuated for smoother motion; thread guide box cams for more positive action; V-belt drive; separate base plate for advance preparation of foundation; oil drip pans (optional).

Robert Reiner, Inc., Weehawken, N. J.

For additional data, request item I-409, using Handy Return Card on page 212.

Steam Cleaning Machine Versatile and Economical

A high-capacity steam cleaning machine, capable of discharging 150 gallons of balanced cleaning solution per hour, is designated the Model LH Clayton Kerrick-Steam Cleaner.

Built to meet the need for low-cost equipment to handle a large volume of cleaning work with utmost speed and efficiency, the new unit is completely self-contained. It offers a graduated range of cleaning pressures extending from 30 psi for such jobs as paint stripping, to 100 psi for the rapid cleaning of heavily encrusted or grease-coated parts and surfaces.

Because full working pressure is attained in two minutes from a cold start, there is no need to keep the machine in operation on a standby basis. It may be turned on and off as the flow of work requires, thereby effecting major economies in operating cost.

A wide variety of models is available: oil-fired and gas-fired; electrically driven and gasoline engine driven; portable, stationary or trailer. Each can be optionally equipped with remote nozzle control.

Clayton Manufacturing Co., Box 550, El Monte, Calif.

For additional data, request item I-215, using Handy Return Card on page 212.

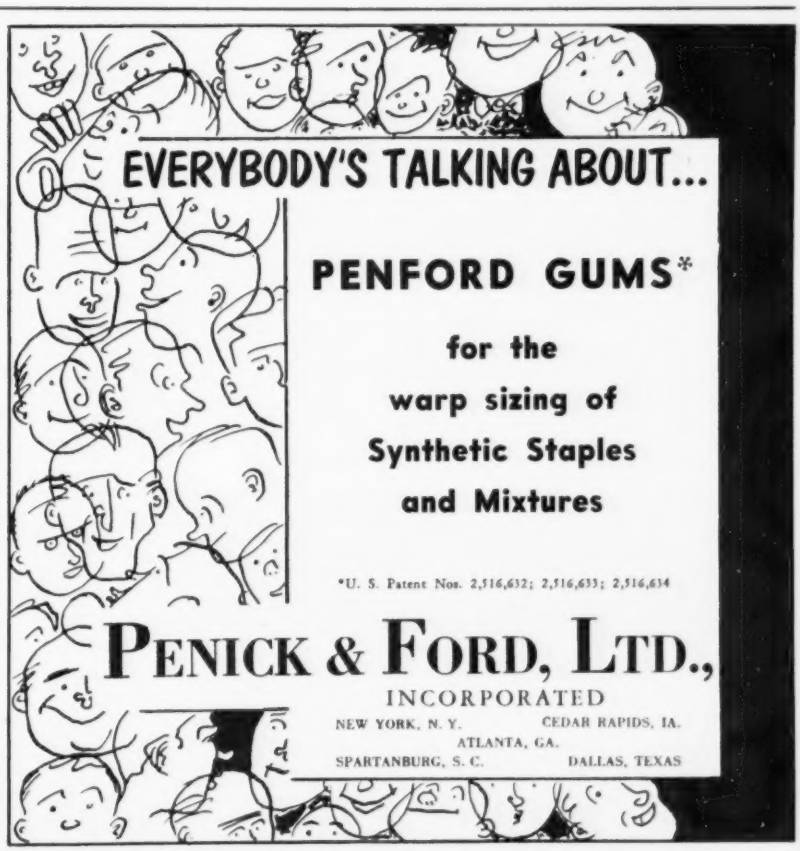
NEW Equipment AND MATERIALS

Economical Process for Printing Photographs on Cellophane Bags

A new process for printing photographic effects on cellophane allows the smaller users of cellophane who ordinarily buy in quantities of one to three thousand pounds to use photographic art for the first time on cellophane bags, wraps, and envelopes.

Called Lassitone, the method permits reproduction of halftone photographs or art on cellophane without the preparation of costly printing cylinders necessary for rotogravure reproduction. Volume users of cellophane can also effect savings through use of the process.

One of the most important advantages is that the process permits production of packages of various sizes from the same set of halftone printing plates. Minor copy changes in designs containing photographs



TIME SAVER

CARTER TRAVELERS

Smooth running work with a minimum of ends down is time—and money—saved. CARTER TRAVELERS give you just that, because they are manufactured with the same degree of precision and workmanship found in a fine watch.

The next time—save time and money—with CARTER TRAVELERS.

CARTER TRAVELER COMPANY
DIVISION OF
A. B. CARTER, INC.
GASTONIA N. C.

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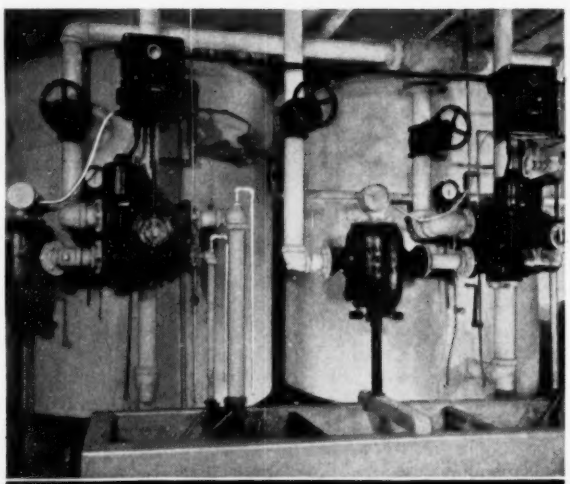
W. L. Rankin	501 S. Chester St. Gastonia, N. C.
P. L. Piercy	128 Hudson St. Spartanburg, S. C.
J. R. Richie	3014 Lewis Farm Road, Raleigh, N. C.
J. W. Brown	P. O. Box No. 560, LaGrange, Ga.
J. K. Davis	P. O. Box No. 129, Auburn, Ala.
C. E. Herrick	44 Franklin St., Providence, R. I.
Hugh Williams & Co.	47 Colborne St., Toronto 1 ,Canada

ECONOMY DEMANDS IT!



MODERN PERMUTIT
Water Conditioning Equipment

Maintaining quality under pressure for lower costs demands the best of **modern** equipment.

If your problem is processing cotton, wool, rayon, silk, or maintaining uniform shades on new synthetics . . . a plentiful supply of clear, softened water will cut your costs, assure consistently high quality.

That's why Permutit Water Softeners are in such demand! They're fast, sure and economical . . . produce water of **zero** hardness, free of damaging impurities. And with automatic controls, assure a constant supply of softened water . . . save operator's time, eliminate the possibility of costly human errors.

Modernize—Convert your softener to automatic controls. Increase its capacity and flow rate by refilling with Permutit Q.

Write today for full details. THE PERMUTIT COMPANY, Dept. TI-9, 330 West 42nd Street, New York 36, N. Y., or Permutit Company of Canada Ltd., 6975 Jeanne Mance Street, Montreal.

WATER CONDITIONING HEADQUARTERS FOR OVER 40 YEARS

PERMUTIT®

The Lassitone method was utilized to print the cellophane with which these diapers were wrapped (Lassiter Corp.).

NEW Equipment AND MATERIALS

can be made with ease without making complete new plates. This enables the small cellophane user to have a "family" design for all his products and make appropriate changes in copy for each item marketed under the same trade name and common logotype.

Lassiter Corporation, 350 Fifth Ave., New York, N. Y.

For additional data, request item I-207, using Handy Return Card on page 212.

Blacklight Lamp Illuminates Invisible Markings on Cloths

A blacklight lamp now on the market will detect all invisible fluorescent powders, chalks and crayon markings. These chalks, powders, and crayons are invisible on light colored materials under regular light, but under the Raymaster Blacklight Lamp they glow an easily visible color.

Essentially low pressure mercury arcs, they furnish a source of long wave ultraviolet or "blacklight," filtered to remove most of the visible light. Their principal application is to excite manufactured fluorescent pigments and materials. The light has no effect on the eyes or skin.

George W. Gates & Co., Franklin Square, L. I., N. Y.

For additional data, request item I-410, using Handy Return Card on page 212.

Dye Assistant for Synthetics and Blends

Dyna-Salt, a new dyeing assistant to be used in conjunction with Amalgamated Chemical's Dynadye-V in dyeing the new synthetics and blends, is a readily soluble, white, 100% active powder which insures proper pH and effectively aids in bath stability. In the past, strong acids had to be used for lowering the pH to the point of maximum efficiency. Dyna-Salt eliminates this need and, unlike acids, is not dangerous to handle. In solution, Dyna-Salt releases its acidity very slowly and converts the Dynadye-V to its most effective form, greatly improving leveling properties.

The use of Dyna-Salt insures greater bath control, with less chance of scum or "lake" formation. It aids materially in preventing the possibility of dyestuff decomposition.

Amalgamated Chemical Corporation, Rorer and Ontario Streets, Philadelphia 34, Pa.

For additional data, request item I-411, using Handy Return Card on page 212.

Lever Set Padder Features No Slippage at Nip, Equal Pressure

A lever set padder recently developed features a middle roll drive for 10-ton pressure and a worm and wheel elevating mechanism. The principle of driving the middle roll eliminates slippage at the nip and also assures equal pressure at both

Stop Blowing-off Steam!
IHE
CAN CONVERT YOUR OBSOLETE STEAM EQUIPMENT TO GAS OR OIL FOR SUBSTANTIAL SAVINGS!
Just look at these advantages:
● Get any desired temperature simply by turning a dial.
● No heat loss from long steam pipe lines. You get, and pay for, only the heat you need.
● The cleanest heat possible. No screen grids or steam coils to gather dirt and lint.
● Individually heated units . . . you heat only the machine to be used.
● No boilers to fire. No pressure to build up. You get the heat you want FAST!
CONVERT TO GAS OR OIL NOW
You'll find the cost surprisingly low.
IHE
MAKES
RESIN CURING MACHINES
PRE-DRYERS
SINGEING AND BRUSHING MACHINES
Industrial Heat ENGINEERING CO.
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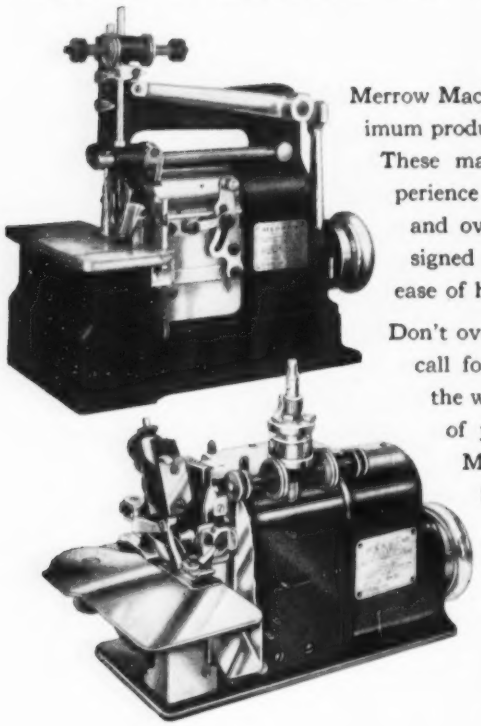
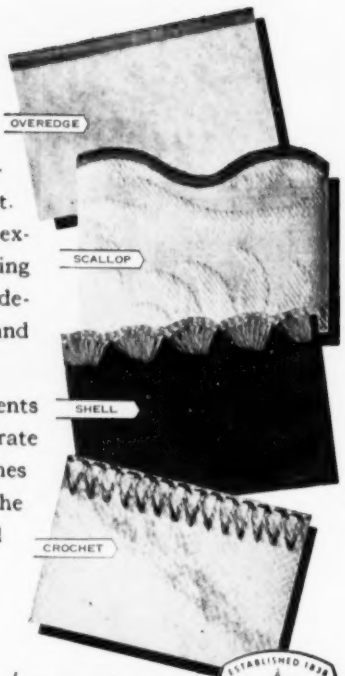
Don't overlook Overedging



Merrow Machines for overedging assure maximum production with low maintenance cost. These machines reflect over 60 years' experience in the manufacture of overedging and overseaming machines. They're designed to produce work with speed and ease of handling.

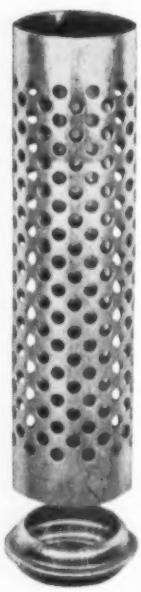
Don't overlook Merrow if your requirements call for overedging. Let us demonstrate the work of these machines on swatches of your own fabrics. Write to The Merrow Machine Co., 2805 Laurel St., Hartford 6, Conn.



Over a century of experience

MERROW

TRADE MARK REG



PRECISION BUILT

DYE TUBES

for your package dyeing machines

MADE EXCLUSIVELY FROM TYPE 304 STAINLESS STEEL

PERFECTLY SIZED FOR ROUNDNESS

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MACHINED ON EACH END FOR FLATNESS AND ROUND EDGES

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ELECTRICALLY FUSED JOINT

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EVENLY SPACED HOLES

Their durability has been proved by rigid acid and crush strength tests.

Several hundred thousand now giving complete satisfaction in Southern dye plants.

Write for Quotation

TOOL SERVICE ENGINEERING CO.
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KLIPLOK CLAMPS FOR FUSE CLIPS

- **Step Up Production**
- **Stop Heating and Arcing at Contacts**
- **Eliminate Burnt Fuses and Clips**
- **Prevent Fire and Accident Hazards**

TRICO "Kliploks" lock fuses and clips together and assure smooth, easy flow of current. Easily and quickly installed . . . Low in cost . . . Pay for themselves many times over. There's a size and type for every fuse clip.

Also Handy for:—

- Cable Splicing
- Tapping to Bus Bar
- Drilling, Soldering, etc.

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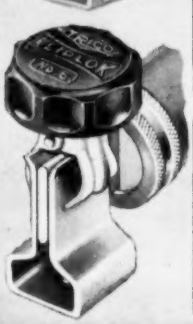

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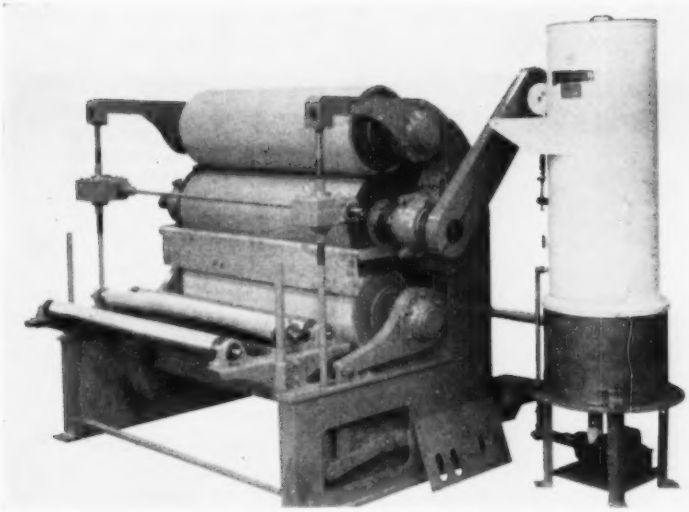
- **Save Oil, Time, Worry**
- **Eliminate Hand Oiling**
- **Reduce Bearing Failures**

Shatterproof plastic and glass reservoir types. Assure maximum machine life. Easily installed.

WRITE FOR FREE CATALOG

TRICO FUSE MFG. CO. MILWAUKEE, WIS.



Ten-ton lever set padder with middle roll drive (Cook-P&N).

nips. A chain drive to the top roll is no longer needed.

All fulcrum points are equipped with new Cook knife-edge pivot pins that have proven very satisfactory in eliminating unequal pressure.

Cook-P & N Machine Co., Boston 27, Mass.

For additional data, request item I-412, using Handy Return Card on page 212.

Shaft-Mounted Speed Reducer

Under the name "Shaft-King," a new 13-to-1 ratio series of shaft-mounted speed reduction units has been introduced to extend the advantages of V-belt drives to cover a wide variety of slow-speed equipment.

Adaptable to any shaft size up to 3 15/16", the speed reducers are compact, requiring only standard shaft engths (twice the shaft diameter plus clearance) to be mounted direct-ly on the shaft of the driven machine.

Both the input and output shaft are above the oil level, eliminating the necessity for bearing seals to operate against a head of oil. Additional features include a leakproof, anti-friction oil sealing system, interchangeable split tapered bushings, and the use of both ball bearings and tapered roller bearings. Overload release and backstop features are optional.

American Pulley Co., 4200 Wissahickon Ave., Philadelphia, Pa.

For additional data, request item I-220, using Handy Return Card on page 212.

30-Denier Dull Nylon Yarn for Tricot Fabrics

A 30-denier dull nylon yarn for use in tricot knitting to provide greater opaqueness in lighter fabrics is being produced on an experimental basis.

The new yarn is to be known as "Type 670," and the manufacturer expects "in time" to be able to offer the yarn in 40 and 70 deniers to its tricot customers.

E. I. du Pont de Nemours & Co., Inc., Textile Fibers Dept., Wilmington 98, Del.

For additional data, request item I-413, using Handy Return Card on page 212.

Silicone Water Repellent Finish Now Available as Water Dilutable Emulsion

DeCetex 104, the silicone durable water repellent finish for synthetics and synthetic blends (described in TI for November, 1952, page 159), is now available as a water-dilutable emulsion. Simply adding water and a catalyst which accompanies each shipment prepares a pad solution ready for immediate use. Tests indi-

Designed by the TEXTILE Industry... Built by Colson

Model 3-408-16 Rigid fork caster with thread guards
Model 3-427-16 Swivel fork caster with thread guards
Model 4-507-65 Rubber caster—swivel fork

By working closely with people in the Textile Industry, The COLSON Corporation has developed a series of wheels, casters and trucks which will fit your *exact* needs. COLSON wheels and casters roll easily over all types of floors. They swivel freely and are rust resistant. Many models have thread guards. Write us *now* or consult the yellow pages of your 'phone book for the name of the COLSON office near you.

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CASTERS • LIFT-JACK SYSTEMS • INDUSTRIAL TRUCKS

FOR KNITTING OR WEAVING

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AMERICAN & EFIRD YARNS

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As advertised in leading magazines

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Combed Peeler or Sak, 10's-90's Single
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Successors to American Yarn & Processing Company and Efird Manufacturing Company

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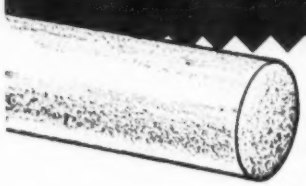
YOU NEED THESE *more efficient* MARKING CRAYONS



ATLANTIC TEXTILE MILL CHALK CRAYON for use with all type bleaches. Colors.

NO. 295 MARKING CRAYON
for silk, rayon, similar fabrics.
Washes out. Colors.

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SEND FOR FREE illustrated marking crayon price book sheet to DEPT. 1 FI

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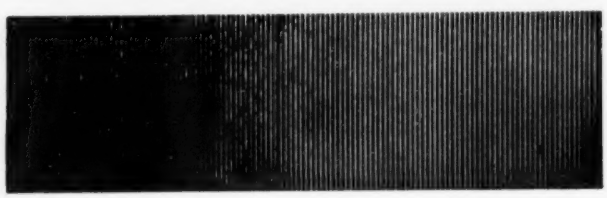

How to renew old reeds

LEFT side of the reed above is shown as it came out of service—right side after 45 minutes of Oakite conditioning. Soil and rust are completely removed without brushing—then a dip in Oakite Special Protective Oil removes moisture, prevents rerusting.

Renew *your* reeds the mill-proved Oakite way. Ask your Oakite Technical Representative, or write Oakite Products, Inc., 26C Rector St., New York 6, N. Y.

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cate that the solution remains stable for 24 hours, while both the emulsion and catalyst remain stable for at least three hours.

Fabrics properly treated with DeCetex 104 Emulsion retain unusually high spray ratings after laundering or dry cleaning. They also exhibit a high order of stain resistance and possess a very desirable hand. They show increased abrasion resistance, greater tear strength, reduced mark-off, and improved sewability.

The finish is colorless and does not alter the appearance of the fabric. No afterwash or neutralizing is necessary. Easily applied with conventional equipment, DeCetex 104 Emulsion may be mixed with common crease resistant resins and applied together.

Dow Corning Corp., Midland, Mich.

For additional data, request item I-216, using Handy Return Card on page 212.

42 Varieties of Check Straps for Most Applications

42 varieties of check straps now available from one manufacturer include four styles, available in two tannages, four weights and three degrees of leather firmness, permitting selection of leather check straps to meet the particular requirements of most mills.

Included in the four styles is the patented BiCut design, specially die-cut to conform to the angle of the picker stick and allow the strap to drop clear of the binder nut and bolt. Other styles include straight, curved, and endless checks.

In addition, two tannages of leather developed especially for check strap production are available—a satin-like finish and a new hairy leather. At the present time, the hairy tannage is available for straight and curved check straps only.

J. E. Rhoads & Sons, 35 North Sixth St., Philadelphia 6, Pa.

For additional data, request item I-414, using Handy Return Card on page 212.

Chain-Drive Overload Device

A device recently placed on the market protects chain drives of all types from overload by tripping a limit switch in the event of excessive tension on the drive leg. Known as the Lamson Overload Protector, it consists of an eccentrically located idler sprocket counterbalanced by a weight-loaded arm. The counterbalance is adjustable so that the device will operate at any chain tension up to 1,000 lb. Design is simple, rugged, and maintenance-free.

A locking lever is arranged so that manual resetting is required to energize the drive once an overload has caused it to act.

Lamson Corporation, Department D50, Syracuse 1, N. Y.

For additional data, request item I-217, using Handy Return Card on page 212.

Roller Bearing Spindle for Spinning or Twisting

A roller bearing spindle made in Switzerland and now available in the United States is designed so that it can be used for either spinning or twisting. Designated the SMM roller bearing spindle by its manufacturer, Spindles, Motors, and Machines Ltd., it operates smoothly so that there are fewer ends down, a more uniform yarn is produced, and larger packages can be accommodated.

The bolster diameter is smaller, with the result that spindle rails of

NEW Equipment AND MATERIALS

the same cross section as ordinarily utilized are even more rigid.

The universal joint is not subject to friction. Lubricating oil remains serviceable for a longer period of time. Oil can be changed without dismantling the bolster. All that is necessary is to pump out old oil and wash through with fresh spindle oil.

Gubelin International Corp., 35 West 53rd St., New York 19, N. Y.

For additional data, request item I-415, using Handy Return Card on page 212.

Automatic Machine Control Requires Little Maintenance

A new type of automatic control system for textile machinery, called TranTork, employs magnetic amplifiers to regulate such functions as speed, tension, torque, or load. Since

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As Production Engineers we specialize in the utilization of

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Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

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MODEL A-VT-A
20,000 R.P.M.

This is NOT a grinder, but the original pneumatic tool especially designed for the SPECIFIC Purpose of

REMOVING LINT and FLY
from the top rolls and other parts of the drafting elements on

SPINNING FRAMES also ROVING FRAMES

Spindle design permits using PICK (which gathers the fly and lint), 3/16" diameter by 5" long when used on Spinning Frames and 3/16" diameter by 7" long when used on Roving Frames. Exhaust air directed back of roll picker to prevent fly and lint from being blown into yarn when spinning, by air deflectors. Weight only 14 oz. Special grease-sealed bearings. No lubrication required.

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Square or Round Points.
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four types to meet your specific requirement

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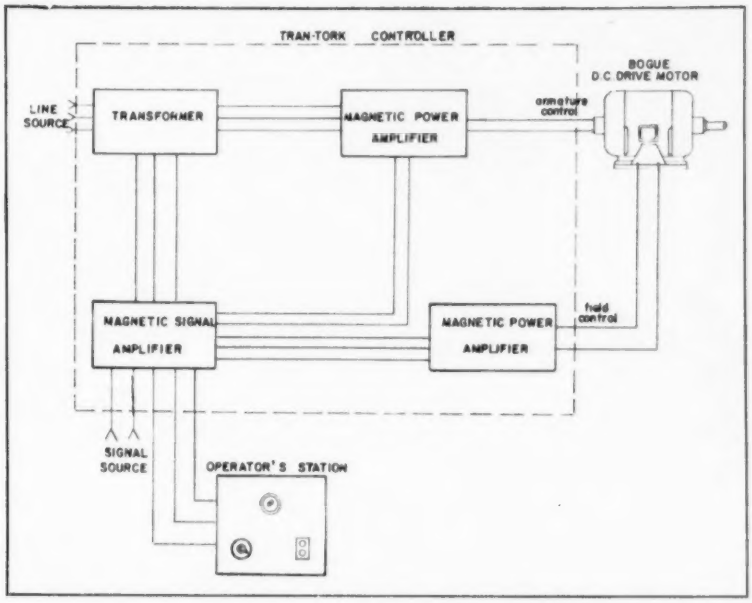

TranTork controller for textile machinery (Bogue Electric).

the control device, which is manufactured as a packaged unit, does not utilize electron tubes or moving parts, maintenance is virtually eliminated. Its ability to meet almost any horsepower requirement and still maintain better regulation than obtainable with other devices is another important feature.

The drives consist of three basic sections: the drive motors, operator's stations, and the controller panel.

As application requirements differ, custom application engineering may be needed. TranTork can be supplied in all power ratings from fractional horsepower drives to 200 horsepower drives. Speed ranges of 150:1 can be handled where constant torque is not a consideration, and speed ranges of better than 30:1 can be attained under constant torque demands.

The controller increases production by permitting maximum output from machines presently controlled manually, and product quality is improved since the regulation is continuous and automatic and is not subject to the human element, resulting in absolute uniformity of product.

The unit is smaller physically than most controls using electronic devices; for example, a 10 horsepower controller will occupy a space of approximately two feet by one and one-half feet by three feet. Higher horsepower rated units will require proportionately larger controllers.

Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

For additional data, request item I-416, using Handy Return Card on page 212.

NEW Equipment AND MATERIALS

New Books

Dyeing, Bleaching, and Finishing Manual, a compilation of selected articles previously published in TEXTILE INDUSTRIES, is designed to provide mill men with up-to-date information on important phases of wet processing. The 185 pages include such chapter titles as "Infra-Red Drying," "Compressive Shrinking," "Developments in Dyeing Synthetic Fibers," "Finishing with Urea Formaldehyde Resins," and "Mothproofing-Detergent Combinations." Available with a three-year subscription to TEXTILE INDUSTRIES at the combination price of $6.00.

Technology of Synthetic Fibers covers information pertaining to the structure, performance, application, and properties of man-made fibers. Edited and coordinated by Samuel B. McFarlane of Celanese Corp. of America, this book contains the contributions of eleven authorities in the field of textile research and tech-

"DRY" HUMIDIFICATION for TRICOT MILLS

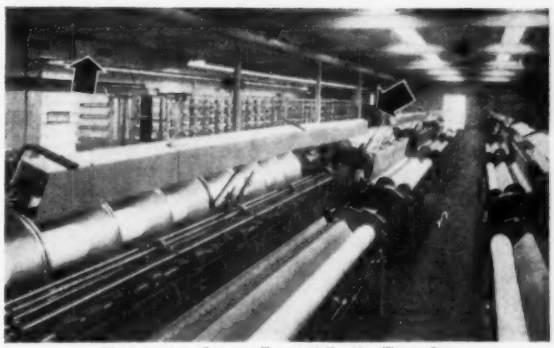

Photo courtesy Security Tricot Mills, No. Wales, Pa.

- Eliminates static electricity
- Reduces needle breakage
- Keeps warps smooth, free from ridges and valleys
- Reduces end breaks
- Permits maximum speed in operation of tricot machines
- Assures highest quality of product

The "Dry" Humidification system humidifies adequately without releasing any free moisture into the atmosphere—NO SPRAY, NO MIST, NO SPOTTY AREAS. Needles, machinery and fabrics are protected from rust and damage. No central system is required. Easy to install. If desired, heating and comfort cooling may be incorporated for complete air conditioning. Models available for every type of knitting plant and textile process.

Write for pamphlet describing controlled indoor weather for knitting mills.

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"Dry" Humidification System

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LOWER SPINNING TAPE COSTS
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TIGER-TUF Spinning Tape

- Assures Top Spindle Speed
- Lower Tape Cost Per Spindle
- Very Low Stretch Factor
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Compare Tiger-Tuf with any other tape. Compare quality —compare costs. You'll want to equip all of your frames with dependable TIGER-TUF. Write today for details.

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Recommended for Both
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This many purpose wetting solution—

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- Removes Knitting Stains Not Usually Overcome in Bleaching.
- Permits Thorough Cleaning of Cloth.
- Makes for More Uniform Bleaching.

PEROXAL #3 is used extensively in the wet-out box before kier bleaching. Besides providing uniform penetration of the bleach liquors, it also removes knitting stains not usually overcome in bleaching. Impurities, including waxes, dirt, motes, etc., are loosened and held in suspension. The cloth is cleaned more thoroughly, and can be bleached uniformly to a clear, brilliant white.

Write for sample and literature.

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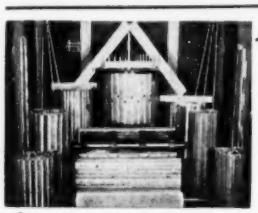

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Whether it's for lightweight or heavy duty fabrics, for plain or automatic looms, we can supply the filling winders you require. If you require a Cop or Bobbin winder we have it. No matter what your needs may be Lazenby can fit your needs. Just send us a small supply of your yarn and we'll wind and return with Test Wind Report and Catalogue.

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nology. Supplementing the text are numerous diagrams, charts, and photographs. Published by Fairchild Publications, Inc., 7 E. 12th St., New York 3, N. Y. $12.00.

Handbook of Noise Measurement, by A. P. G. Peterson of General Radio Co. and Leo L. Beranek of the Massachusetts Institute of Technology, includes information on the measurement of airborne sounds, including definitions, standards, measuring equipment, procedures, and interpretation of results. It replaces the previous publication, "Noise Primer." 120 pages, paper bound. General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass. $1.00 postpaid, cash with order.

Review of Current Research, published biennially, reports on approximately 7500 research projects from 103 institutions belonging to the Engineering College Research Council. All branches of engineering and most related fields are covered in this review. Copies available from V. E. Neilly, secretary, Engineering College Research Council, 103 Mechanical Engineering, The Pennsylvania State College, State College, Pa.

The Indian Cotton Textile Industry and Economic Analysis was written by Dr. S. D. Mehta with a forward by Sir Homi Mody. It presents a detailed study of the textile industry of the country. The work is the result of first-hand investigation of over 30 mills and interrogation of over 800 persons. Published by The Textile Association (India) Regd., Suparibaug Road, Bombay 12, India, in commemoration of the 100th anniversary of the Bombay Textile Industry.

The Application of Vat Dyes, the second of a series of monographs prepared by a board of editors from the American Association of Textile Chemists & Colorists, embodies all aspects of the dyeing and printing of textile fibers, yarns, and fabrics with vat dyes according to current American practices. It is intended for use as a reference, as a textbook, and, in a sense, as a manual for those actively engaged in mill application of vat dyes. Published by AATCC, Lowell, Mass.

The National Safety Council's new **Handbook of Accident Prevention for Business and Industry** is a convenient safety guide for the manager of a small business or supervisor of a department in large organization. It shows how to set up and maintain a safety program. Plant layouts, materials handling, housekeeping, machine guarding, etc., are typical of subjects dealt with. National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

A sequel to "The Cotton Plant in Egypt" by W. Lawrence Balls is **The Yields of a Crop,** based on an analysis of cotton growing by irrigation in Egypt. In this new volume the author summarizes the development of the agricultural side from those early studies into a fuller understanding of the cotton crop in Egypt. He makes of this special interest a baseline to which the limitations of other crops can be referred in terms of botannical knowledge. E. & F. N. Spon Ltd., 22 Henrietta St., London W. C. 2, England.

Textiles and Testing Course of Study, a workbook used in United States Testing Company's annual refresher textile course, combines testing methods with basic textile information. Chapter headings are: Raw Materials of the Textile Industry; Yarn Manufacturing and Testing; Fabric Manufacturing and Analysis; Hosiery Testing; and Chemical Tests in Fabrics & Dyestuff Analysis. Published by U. S. Testing Co., 1415 Park Ave., Hoboken, N. J. (price, $2.75).

Rayon Staple Fibre Spinning, by S. A. G. Caldwell, contains a concise review of the economics of the industry, fiber production and the intrinsic properties, opening, blending, carding, drawing, and spinning on the cotton, woolen and worsted, flax and jute systems, with production and machine calculations and yarn characteristics at every process. Emmott & Co. Ltd., 31 King St. West, Manchester 3, England.

The text of 61 sessions on various aspects of maintenance and plant engineering held during the Plant Maintenance & Engineering Show in Cleveland in January is contained in **Techniques of Plant Maintenance—1953.** 859 questions and answers presented at the general and sectional conferences are included. Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y. (price, $6.00).

1953 Manual of the Textile Industry of Canada traces the industry's development during the past quarter

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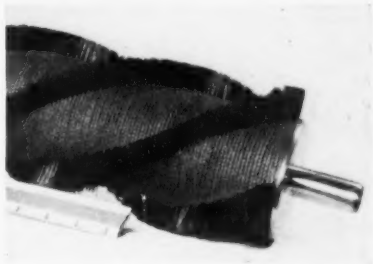
Metal Core

Nylon Bristle

IN-DUS-CO CARD BRUSH



You would expect to pay much more for a metal core, nylon bristle card brush than for the usual wood core brush with all its faults.

Yet by our "Fineset" method of setting bristle firmly in plastic binding in a metal core, the IN-DUS-CO CARD BRUSHES match the first cost of wood core brushes. The IN-DUS-CO metal core CARD BRUSH has many other features that commend it to mill men.

Added Advantages

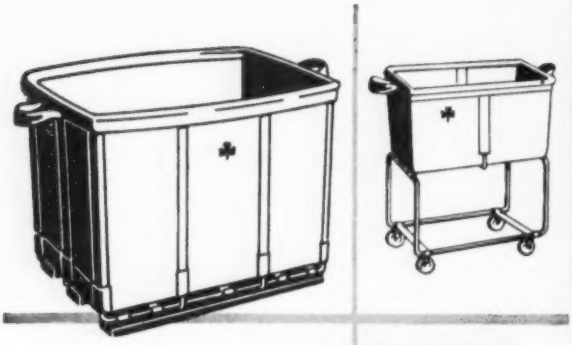
- The bristle is closely set with an open space between the spiral rows of bristle for easy cleaning.
- Lint and dirt find no lodgement at the base of the bristle or in the wide, screwless space between the rows of bristle.
- *The indestructible metal core will not wear or sag in use. It will far outlast the best of wood cores.*

Write for catalog and prices.

INDUSTRIAL BRUSH CO.

Woodside Avenue

Little Falls, New Jersey



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OF RUGGED SERVICE

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CANVAS BASKETS, HAMPERS, TRUCKS
Many styles and sizes. Also special sizes and shapes to meet your need.

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MEESE, INC.
Main Office & Plant
MADISON, INDIANA
Phone 261 or 262

Dorr Woolen Mills, Guild, N. H.

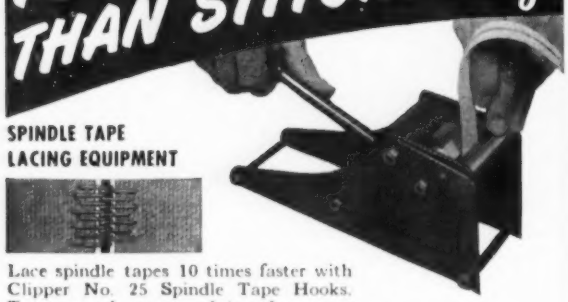
for accurate cloth guiding at top tenter frame speeds

- **Works at highest speeds** . . as fast as you want the tenter frame to go.
- **100% pickup** . . keeps up with fast runouts . . works perfectly with over-feed.
- **For any cloth** . . heaviest woolens to lightest gauze . . pins or clips closer to selvage.
- **Non-Contact** . . only a breath of air touches the cloth . . lint-free . . cannot clog.
- **Easy to Install** . . pin or clip type tenter frames . . attached without extensive machine changes.
- **Easy to Maintain** . . your own men can keep it going . . no electronics.

For further details, ask for Bulletin 161

ASKANIA REGULATOR COMPANY
240 E. Ontario Street
Chicago 11, Illinois
Subsidiary of General Precision Equipment Corp.

10 TIMES FASTER THAN STITCHING!

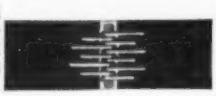


SPINDLE TAPE
LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.



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Clipper BELT LACING EQUIPMENT

Industrial Engineers

SPECIALIZING IN TEXTILES FOR OVER ONE-THIRD OF A CENTURY

PAYROLL CONTROLS COST SYSTEMS
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The Nation's largest manufacturer of Sizing Compounds, Gums, Waxes and other kindred products for all warp yarns.

NEW Equipment AND MATERIALS

century. Market information merchandising techniques, manufacturing information, directory of textile mills in Canada, etc., are some of the features of this cloth bound volume. Canadian Textile Journal Publishing Co., Ltd., 223 Victoria Ave., Westmount, Montreal 6, Que. (price, $2.00).

The 1953 compilation of **ASTM Standards on Soaps and Other Detergents** contains 17 specifications for many types of soaps and soap products, nine specifications for various special detergents, and nine methods of analysis covering soaps and other detergents. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. (price, $2.25).

The **National Directory of Safety Films** for 1953-54 provides a comprehensive listing of 963 motion pictures and slidefilms for use in training personnel in occupational accident prevention. National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill. (price, $0.75).

Want More Information on These Items?

Use Handy Return Card on page 212, giving Key Number (I-300, etc.) which appears after the name of the supplier of the item in which you are interested. Or, if you prefer, write supplier direct.

Stock sizes of **roller chain sprocket wheels** with taper lock bushings for ½, ⅝, ¾, 1, and 1¼-inch pitch single width chains facilitate immediate delivery and rapid installation. Without reboring, they can be securely mounted on a shaft, equivalent to a shrink fit.

Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill. (I-301).

A compact, hydraulically-operated **load revolving mechanism** for use on Elwell-Parker hydraulic fork trucks is designed for use in conjunction with forks, roll clamps, up-enders, etc. Permits 360° rotation.

Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 3, Ohio (I-302).

Two new "collapsible" **wardrobe racks** have unique twin hanger bars that double capacity. Three-foot unit holds 48 coats; four-foot unit, 64. Racks are portable, can be "knocked down" for storage or transportation.

Vogel-Peterson Co., 1127 West 37th St., Chicago 9, Ill. (I-303).

Two new lines of improved **portable electric instruments** are designed for maximum convenience and readability. Designated Type DP-11 and DP-12, they are available to indicate volts, watts, amps, and milliamps.

General Electric Co., Schenectady 5, N. Y. (I-304).

A 1½" **acidproof sump pump** handles acid sludges, corrosive and foamy products with solids in suspension, and all types of difficult pumping where heads up to 35 feet and flows to 75 gpm are required. The welded steel vertical pump is completely rubber lined and covered. Neoprene and special rubber compounds are available for unusual applications.

The Galigher Co., 545 West Eighth South St., Salt Lake City, Utah (I-305).

Automatic insect control for industrial plants can be obtained by use of a permanent atomizing system that can be economically installed in existing buildings or incorporated in new building plans. Vaposector, an insecticide containing pyrethrum, is recommended for use in the equipment.

West Disinfecting Co., Long Island City, N. Y. (I-309).

A **hose and tool cabinet** now available is specially designed for storing industrial type vacuum cleaning hose and cleaning tools. Tools are protected from damage and loss and plant housekeeping improved.

U. S. Hoffman Machinery Corp., 105 Fourth Ave., New York, N. Y. (I-308).

Engineering principles incorporated in a new **solenoid-operated steam valve** automatically compensate for normal steam valve expansion and deposits, assuring greater valve efficiency, longer valve life, and less maintenance.

Atkomatic Valve Co., Dept. 224, 545 Abbott St., Indianapolis 25, Ind. (I-306).

Orr SLASHER Cloth

With Special Chemical Treatment

Something New and Better

• Slasher Cloth is an important maintenance item in a cotton mill. With the introduction of ORR Slasher Cloth with Special Chemical Treatment, many of the problems which have pestered the slasher room foreman have been eliminated.

The slasher room foreman, in order to satisfy the superintendent and the cost department, must have available a Slasher Cloth that:

1. Dresses the yarn properly.
2. Holds its width. No shrinkage.
3. Maintains level production performance
4. Starts fast — lasts long.

ORR Special Treated Slasher Cloth maintains uniform dressing properties, resists bacteria and steam degradation, maintains dimensional stability. Discuss your Slasher Cloth problem with your ORR representative.

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PICK ARM LUG STRAP—Another Fine Rice Dobby Product

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Leather and Fibre Adjusting Strap
Special Braided Loom Cord
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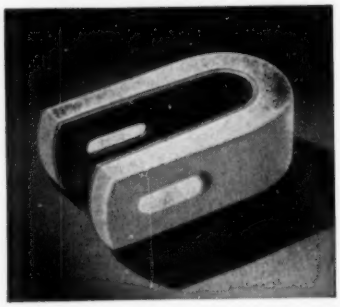
Improved Dobby Bars
Dobby Pegs



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TEXTILE BRUSHES for EVERY NEED

Solve all your textile brush problems by one stroke with the complete service we render for all mill operations. Gastonia Brushes are always dependable.

LOOM DUSTER
Solid back construction,

Five Inch brush—hair—staple set, trimmed 2&3/4". Workmanship and Materials Guaranteed. Request Catalogue.

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Strip Clean Instantly
Fit Any Sized Roll
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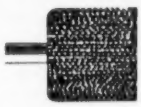
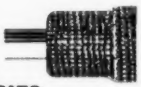
No Seams—No Frayed Ends
Outlast Paper or Cloth Covers—3 times





Free Trial: Send us an old scavenger roll to be recovered. We will return it to you prepaid and let you be the judge.

We also make: Knit Dye Tubing; Sheepskin and Cloth Clearers; Star Brand ★ Roller Varnish.

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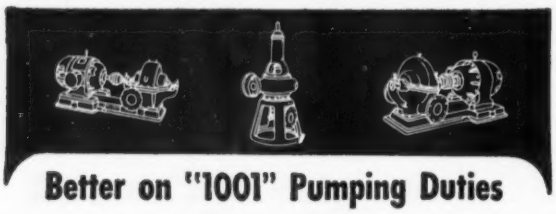
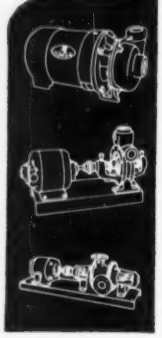


Better on "1001" Pumping Duties

Capacities to 150 G.P.M.

Heads to 500 Ft.



APCO Two-Stage Turbine Type Pump for High Pressure Service

Apco—the pump with but one moving part, the impeller — is famous for long-lived, efficient performance on small capacity, high head duties. Available in Single Stage, Two Stage and 4-Stage Tandem for high pressures — and Water Jacketed for high temperature and highly volatile liquids.

Write for Bulletins 111, 111-A, 111-WJ

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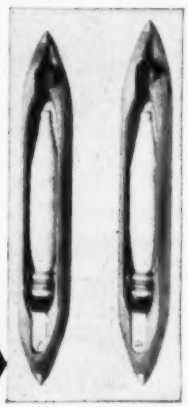
AURORA Always PUMPS — AURORA PUMP COMPANY

SUBSIDIARY OF THE NEW YORK AIR BRAKE COMPANY
90 Loucks Street, Aurora, Illinois

HAVE YOU TRIED THEM?



. . . Watson-Williams' newest additions—shuttles for Draper Looms, fitted with Cast Iron Eyes, to accommodate a longer filling package. Left—15¼" long. Right—15¾" long.

WATSON-WILLIAMS Mfg. Co.
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Guy C. Burbank, 32 Beaconsfield Rd., Worcester 2, Mass.
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NYLON & RUBBER YARN BEAMS

MILTON aluminum alloy Tricot and Section Beams feature CONTINUOUS WELDED CONSTRUCTION

Drop-forged, heat-treated aluminum alloy heads and extra heavy barrels withstand pressures of nylon and rubber warps.

WRITE FOR FREE BULLETINS
No. 45-B (Steel Beams) No. 49-A (Light Metal Beams)

MILTON MACHINE WORKS, INC.
MILTON • PENNA.

SUPPLIERS News
WHAT THEY ARE DOING

(Continued from page 60)

new company is concentrating its service in the textile industry and will specialize in accounts receivable financing.

Offices of **Ernest L. Frankl Associates** have been removed to 515 Madison Avenue, New York 22, N. Y.

Harold E. Huber, with the **Girdler Co.** since 1943, is now a member of

Mr. Huber

the technical sales department of the firm's Votator division.

Charles A. Higgins has resigned as chairman of the board of **Hercules Powder Co.** and as a member of the firm's finance committee, while remaining a member of the board of directors. Succeeding him as chairman is Anson B. Nixon, and Albert E. Forster, president of Hercules, is filling the vacancy left on the finance committee.

Hooker Electrochemical Co. has purchased the **Marble-Nye Co.** of Worcester, Mass., and will operate it as a wholly owned subsidiary. George J. Bruyn, formerly administrative assistant to the vice-president of Hooker, will be vice-president and manager of Marble-Nye. No other changes are contemplated.

Monsanto Chemical Co.'s Merrimac division has announced the appointment of several branch sales managers: Philip L. Slayton, Chicago territory; Lloyd D. Shand, Ohio territory, which includes counties in Pennsylvania and West Virginia; Duane M. Feeley, St. Louis and Texas territory; Roy T. Cowing, Charlotte, N. C., with the states of Virginia, Tennessee, Mississippi, Louisiana, Alabama, Georgia, North and South Carolina, Florida, and sections of West Virginia and Maryland; and Thomas F. Gogan, whose New York district will include New York, New Jersey, Delaware, and parts of Connecticut, Pennsylvania, and Maryland.

A full tuition scholarship has been established at North Carolina State College, School of Textiles, by the **Union Carbide and Carbon Chemicals Co.** It is to be awarded to a student in the school for his senior year of study in textile technology or textile chemistry and dyeing.

Fred E. Antley, Box 802, Greenville, S. C., now handles the South Carolina territory for the **Orr Felt and Blanket Co.**, of Piqua, Ohio.

Fred E. Schroder, formerly associated with the J. P. Stevens Co. group, is now with **Robert and Company Associates**, Atlanta, Ga., as a member of the textile engineering staff. Also appointed to the staff was Charles P. Roberts, who was previously with Lockwood-Greene Engineers, Inc.

Link-Belt Limited recently opened its 72,000 sq ft engineering plant at Scarboro, Ontario, with an open house attended by more than 500 civic leaders, engineers, and industrialists. It becomes the firm's 18th plant.

New Los Angeles district manager of **Mason-Neilan Regulator Co.** is

Mr. Thackara

Alex M. Thackara, who has been with the firm since 1939.

Everett J. Clark and I. Peters have joined the sales staff of **Metro-Atlantic, Inc.** Mr. Clark's territory will be parts of the New York metropolitan area, southern Pennsylvania, Maryland, Delaware, and Virginia. Mr. Peters will cover parts of the metropolitan area and northern New York State and Pennsylvania.

A new company known as **Jones & Hunt, Inc.**, B. M. Jones, president, has taken over the plant and facilities of B. M. Jones Co., Gloucester, Mass., started by Mr. Jones, formerly with Rodney Hunt Machine Co., to carry

THE SIGN OF THE BULLSEYE . . .

THE STANDARD CARD CLOTHING CO. DEPENDABILITY GUARANTEED DURABILITY STAFFORD SPRINGS CONN.

Means the Finest Card and Napper Clothing!

The Bullseye is the sign of the long-established Standard Card Clothing Co. . . . and Standard stands for quality!

Now Standard announces improved service to mills in the southern area by the appointment of a new representative, well qualified to discuss carding and napping problems.

We sincerely hope that the mills will call on our representatives for help in solving their problems.

Representatives:

Roy Schrimshire
P. O. Box 906,
Columbus, Ga.

Walter W. Rodgers, Jr.
P. O. Box 3561,
Greenville, S. C.

STANDARD CARD CLOTHING CO.

INC. 1910

STAFFORD SPRINGS, CONN.

ALL STEEL
ECONOMY BALING PRESSES
ALL SIZES FOR ALL PURPOSES
LARGEST LINE BUILT IN U.S.A.

ECONOMY BALER CO., DEPT. C. ANN ARBOR, MICH., U. S. A.

REPRESENTATIVES:

43 Water St., New York 4, N. Y.

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170 Summer St., Boston 10, Mass.

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TO THE TEXTILE INDUSTRY FOR OVER ½ CENTURY

Surveys—Reorganizations—New Plant Developments for Cotton, Wool, and Synthetic Yarn and Cloth Processing, Bleaching, Dyeing, Printing and Finishing.

★ Plant Appraisals ★ Mechanical and Operating Surveys — New Methods ★ Scheduling and Planning ★ Work Load Studies, Job Analysis and Evaluation, with Incentive Plans ★ Standard Cost Installations ★ Cost Control Methods.

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Knitting and Warp Yarns

Cotton 4's to 30's

Viscose Rayon and Blends with Orlon, Vicara and Dynel 18's to 30's, single and ply

COMER-AVONDALE MILLS, INC.

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AVONDALE MILLS
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COWIKEE MILLS
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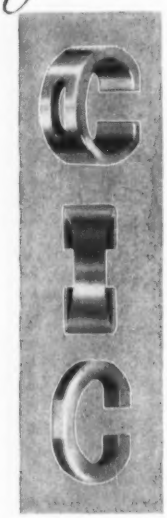
RING TRAVELERS
for every spinning and twisting purpose



STANDARD IN U. S. A.

AMERICAN
HICKS
WILSON

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WENTWORTH
Double Duty Gravity
Gravity Express Bal — Ellipsoid

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NATIONAL-ETARTNEP FINISH

We regularly make ring travelers in the standard common sizes and also design ring travelers to your individual specifications, to meet special requirements. Make use of our long experience in designing and manufacturing ring travelers . . . the most extensive in the field . . . to improve your spinning. Ask us for recommendations. National Ring Traveler Company, Pawtucket, R. I., and Charlotte, N. C.

Frederic L. Chase, Jr.
President and Treasurer

•

L. Everett Taylor
Southern Manager

NATIONAL RING TRAVELERS

OLDEST AND LARGEST MANUFACTURER OF RING SPINNING AND TWISTING TRAVELERS IN THE UNITED STATES

For Nearly Half A Century

• • • • we have been printing Textile Industries and other W. R. C. Smith Publications in our growing plant which is today one of the South's largest, leading and most progressive printing organizations.

L. A. LEE Company, Inc.

DALTON, GEORGIA

Printers and Publishers

SUPPLIERS News — WHAT THEY ARE DOING

on research and experimental work on Fiberglas plastics. Jones & Hunt is specializing in the manufacture of corrosion resistant Fiberglas plastic

Mr. Jones **Mr. Hunt**

tanks, trucks, and special molded products. They are also representing the **National Drying Machine Co.** in the northeastern states. L. B. Hunt is vice-president of the firm.

A new sales office has been established by **Koppers Co., Inc.,** in the Healey Building, Atlanta 3, Ga. Leo J. Diamond, formerly representative in the New England district, is manager of the southern office.

James E. Baskin has joined the product development section of Fiber Glass division of **Libbey-Owens-Ford Glass Co.**

Philip S. Hill has been made vice-president in charge of all sales of the **Hyster Co.** He has been general sales manager for the past several years. Jack Lewis, former chief production engineer, was made vice-president in charge of all production.

A commercial research department to consolidate activities carried on by other departments, has been established at **Interchemical Corp.** Dr. Zeno Wicke is manager of the new department.

Henry H. Richardson has been made sales manager of **Universal Winding Co.,** in charge of domestic sales of all of Universal's products. He has been in the export sales department.

New president of the **New York Cotton Exchange** is Bernard J. Conlin of B. J. Conlin & Co. Edward J. Wade, Wade Bros. & Co., was elected vice-president.

New warehouse facilities have been established in Springfield, Mass., by the **New York & New Jersey Lubricant Co.,** to offer better service to its customers in western Massachusetts and adjacent industrial areas.

SKF Industries, Inc., has opened a new district office and warehouse in Charlotte, N. C. David B. Eden, Jr., is manager.

A 50,000 sq ft textile chemical plant will be erected in Charlotte, N. C., by **Standard Chemical Products, Inc.** The main office and plant of the

Arkansas Company's Fiftieth Year

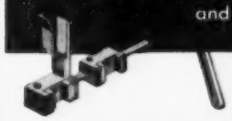
The 50th anniversary of **Arkansas Co., Inc.,** Newark, N. J., was recently celebrated with a dinner for the executive staff and employees. The firm was organized in 1903 to promote the sale of paints made from shale oil that originated near Hot Springs, Ark. Later the company entered other fields, and began the production of industrial chemicals for the textile, leather, and paper trade. The firm moved to Newark, N. J. in 1938, and a research program was instituted to develop new chemicals. Left to right in this picture are N. E. Shane, vice-president in charge of sales development; J. E. Allen, treasurer; C. M. Braham, president; and C. L. Schuttig, vice-president and sales manager.

Best

★ FOR PERFORMANCE
★ FOR LONG LIFE
★ FOR HIGH SPEEDS
★ FOR PRICE

Vermont SPOOLS AND BOBBINS SINCE 1906
234 S. CHAMPLAIN ST.
BURLINGTON, VT.

Permalube SADDLES and NEBS
Wear Longer • Perform Better and Cost Less!



NO OILING IN THIS MILL

One 600,000-spindle mill has been using Whitehead Permalube Saddles and Nebs for two years on *hardened-steel* rolls. Ends down have been reduced from 30 to 15. Frames are cleaned only once in several weeks, instead of twice daily. And oiling costs have been completely eliminated. Whitehead Permalube Saddles and Nebs can do the same for you. Write for complete information.

Coleman Co., Box 3597, Greenville, S. C.
Roy Schrimshire, Box 906, Columbus, Ga.
Matthews Equip. Co., 93A Brdwy., Prov., R. I.
Don O'Hair, Box 8254, Charlotte 8, N. C.

WHITEHEAD ENGINEERING CO.
522 WEST PEACHTREE STREET, N.W.
ATLANTA 3, GEORGIA

CLASSIFIED ADS

BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

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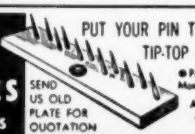

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SUPPLIERS News
WHAT THEY ARE DOING

firm will remain in Hoboken, and the Charlotte plant will serve as the southern headquarters.

Standard-Coosa-Thatcher Co. has moved to new offices in the Empire State Building, New York, N. Y., Suite 1005.

Gordon E. Medlock, associated with the company since 1946, has been appointed sales manager of **Stearns Magnetic Inc.,** Milwaukee, Wis. He will be responsible for the sales of the company's line of magnetic separation and power transmission equipment.

The **Steel Heddle Manufacturing Co.,** Philadelphia, Pa., has acquired complete ownership of the **Emmons Loom Harness Co.** of Lawrence, Mass., and Charlotte, N. C.

Walter B. Pratt, who has been president of the firm since 1928, was presented a silver service upon his retirement from **Sykes, Inc.** He is succeeded as president by Charles E. Mason. Norman B. Crowther was elected to the board of directors to fill the vacancy created by Mr. Pratt.

Robert B. Cook has been assigned to the New England sales territory of **A. M. Tenney Associates, Inc.** He succeeds Fred B. Pollard, resigned.

The Boston Wool and Textile Laboratory and the Boston Research division of the **United States Testing Co.** have been consolidated and removed to larger quarters at 288 "A" Street, Boston, Mass. R. T. McAndrew will be in charge of the combined laboratory functions. The firm has also announced that the W. J. Westaway Co., Ltd., of Hamilton, Ont., is acting as Canadian agents for the company's scientific research and testing services.

Marjorie A. Stamm has joined the fiber division of **Virginia-Carolina Chemical Corp.,** and will be concerned with the retail merchandising and sales promotion of "Vicara." She was formerly with the Wool Bureau, Inc.

Sill Industries, Maplewood, N. J., were recently appointed to handle the entire line of gas-fired heating equipment for the **Carbomatic Corp.,** Freeport, N. Y.

A $14 million titanium dioxide plant is to be built at Savannah, Georgia, by the **American Cyanamid Company's** Chemical Division. Construction of the new plant will begin the last quarter of this year and is expected to be completed early in 1955.

The **Dodge Manufacturing Corp.** recently commemorated the 75th anniversary of the firm's founding. At a civic testimonial luncheon a bronze plaque was presented to Dodge president Joseph E. Otis, Jr., on behalf of the city of Mishawaka, Ind. Also featured during the celebration was an open house at which more than 3200 guests took guided tours of the plant.

Sandoz' New Office in Cincinnati

Here is the new midwest branch office of Sandoz Chemical Works, Inc., located at 3712 Beechmont Avenue, Cincinnati 26, Ohio. The move from Chicago was made in view of expanding activities and in order to be nearer the dyestuff manufacturing source. Arthur A. Barker is manager of this branch with A. B. Mitchell and R. Y. McCarter assisting him in the Midwest territory. At present the laboratory customer service is performed by the Charlotte branch of Sandoz in North Carolina.

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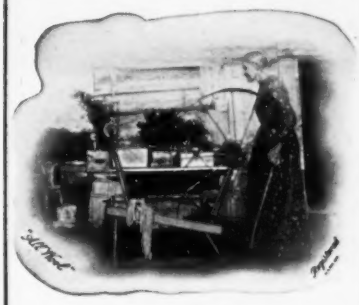

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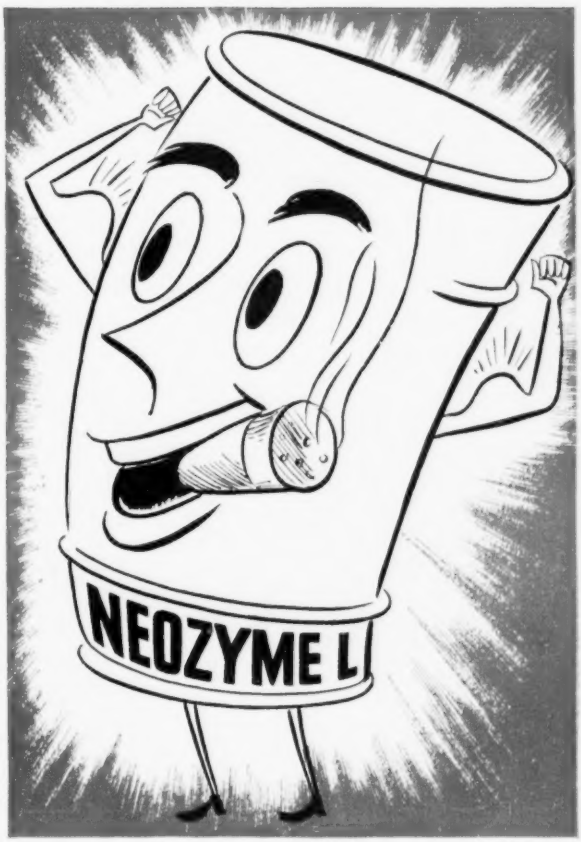

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